

State of Montana

Department of Natural Resources and Conservation

STATE DOCUMENTS COLLECTION

MONTANA STATE ARCHIVES
1500 FULTON
HELENA, MONTANA

Annual Report

PLEASE RETURN

for
Fiscal Year 1998

July 1, 1997, to June 30, 1998

MISSION STATEMENT

To help ensure Montana's land and water resources provide benefits for present and future generations.

GUIDING PRINCIPLES

1. We obey the law.
2. We tell the truth.
3. We follow through on commitments and are accountable for our actions.
4. We believe in being fiscally responsible for the taxpayer's money.
5. We invite the public to participate in our actions and decisions.
6. We provide prompt and courteous service to all our customers.
7. We value and trust one another and strive for a healthy and productive work environment.

Montana Department of Natural Resources
and Conservation

ANNUAL REPORT FOR FISCAL YEAR 1998

JULY 1, 1997, TO JUNE 30, 1998

1625 Eleventh Avenue
P.O. Box 201601
Helena, Montana 59620-1601

Phone 406 444-2074

Fax 406 444-2684

TABLE OF CONTENTS

Letter from the Director

Introduction	1
Department Organization	3
Division Duties and Responsibilities	3
Financial Information	7
Programs	9
Centralized Services Division	11
Conservation and Resource Development Division	13
Conservation Districts Bureau	
Resource Development Bureau	
Forestry Division	33
Fire and Aviation Management	
Service Forestry Programs	
Oil and Gas Conservation	43
The Underground Injection Control Program	
Activity Review	
Reserved Water Rights Compact Commission	49
The Compact Commission	
Federal Reserved Water Rights	
Completed Compacts	
Current Negotiations	
Preliminary Discussions	
Other Reserved Rights	
Trust Land Management Division	55
Overview	
Agriculture and Grazing Management	
Forest Management	
Minerals Management	
Special Use Management	
Water Resources Division	69
State Water Projects	
Water Management	
Water Operations	
Water Rights	
Regional Offices	
Appendix A. Funding Information Concerning the Resource Indemnity Tax and the Coal Severance Tax	91

Figures

1. DNRC Organizational Chart	4
2. Location of DNRC Offices	6
3. Montana's Conservation Districts	14
4. Allocation of Grant Funds for Conservation District Projects in FY 1998	18
5. Resource Conservation and Development Areas in Montana	21
6. Montana Salinity Control Association	22
7. Allocation of Funds for Approved Reclamation and Development Grant Projects	23
8. Allocation of Funds for Approved Renewable Resource Development Grants	24
9. Number of Fires on State-Protected Land	35
10. Acres Burned on State-Protected Land	35
11. Percentage of Fires, by Cause(5-Year Average)	36
12. Seedlings Sold	38
13. New Hazard Reduction Agreements	40
14. Oil Production by Region in 1997	44
15. Crude Oil Production in Montana (1954 - 1997)	45
16. Wells Completed in 1997 by Region	46
17. Location of Federal Reserves in Montana	50
18. Current Land Ownership	55
19. Permanent Fund Balance	56
20. Distribution of Revenues for the Common School Trust	57
21. Agricultural Rentals	60
22. Grazing Rentals	60
23. Timber Volume Sold	62
24. Timber Revenue Received	62
25. Timber Volume Prepared for Sale	63
26. Total Mineral Revenue by Mineral Type	64
27. Oil and Gas Revenue (excluding Seismic Exploration)	64
28. Coal Royalties	65
29. Special Use Revenues by Source in FY 1998	66
30. Special Use Revenues since FY 1994	66
31. Montana General Adjudication Status	87
32. Water Right Applications Received in FY 1998 by Region	88
33. Water Right Transfers Received in FY 1998 by Region	89

Tables

1. DNRC Expenditures and Funding in Fiscal Year 1998	7
2. Conservation District Project Grants Awarded in FY 1998	19
3. Watershed Planning Assistance Grants Awarded in FY 1998	20
4. Reclamation and Development Grants Program — 1998 Applications	25
5. Renewable Resource Grant and Loan Program — 1998 Applications	26
6. Public Loans	29
7. State Wastewater Revolving Fund Loans	30
8. Proposed Drinking Water Revolving Fund Loans	31
9. Treasure State Endowment Loans	31
10. Fire Protection by DNRC in FY 1998	34
11. Development Projects in FY 1998	36
12. Aviation Program Accomplishments in FY 1998	37
13. Nursery Sales in FY 1998	38
14. Forest Pest Management Activities in FY 1998	39
15. Forest Practices Activities in FY 1998	41
16. Major Categories of Community Forestry Activities in FY 1998	42
17. Five-Year Summary of Oil Production in Montana	45
18. Summary of 1997 Oil and Gas Activities	46
19. Summary of 1997 Well Drilling by County	47
20. Five-Year Summary of Wells Drilled	47
21. Compacts Concluded by the Reserved Water Rights Compact Commission	51
22. Revenue Generated for the Trusts and Permanent Fund Balances in Fiscal Year 1998	56
23. Four-Year Summary of Revenue Generated (by Activity)	59
24. Forest Improvement Activities in FY 1998	62
25. Revenues Received from Minerals in Fiscal Year 1998	64
26. Special Use Revenues in Fiscal Year 1998	66
27. State-Owned Storage Dams Managed by the State Water Projects Bureau	70
28. Lenses Associated with DNRC-Owned Water Projects	69
29. Status of Tongue River Project Components	71
30. Broadwater-Missouri Power Project in FY 1998	76
31. Water Rights Applications in Fiscal Year 1998	88

DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION



MARC RACICOT, GOVERNOR

1625 ELEVENTH AVENUE

STATE OF MONTANA

DIRECTOR'S OFFICE (406) 444-2074
TELEFAX NUMBER (406) 444-2684

PO BOX 201601
HELENA, MONTANA 59620-1601

Dear Reader:

Welcome to the third annual report of the Department of Natural Resources and Conservation (DNRC). Our mission is "to help ensure Montana's land and water resources provide benefits for present and future generations." This annual report covers DNRC's programs and the accomplishments that occurred during Fiscal Year 1998 (which ended on June 30, 1998). It has been a very productive year for the department and we have made great progress in many different areas.

Some of the highlights from this year's report include:

- Actively administering over 300 contracts and disbursing approximately \$15 million in grant and loan funds for projects, through the Conservation and Resource Development Division
- Receiving, depositing, and distributing over 30,000 checks to trust, federal and state accounts, through the Centralized Services Division
- Protecting over 50 million acres of state and private lands from wildfire, and keeping 94 percent of all wildfires that occurred under 10 acres in size, through the Forestry Division
- Plugging and restoring "orphan wells" using \$911,000 to date in reclamation and development grant funds, through the Board of Oil and Gas Conservation
- Continuing negotiations concerning the federal reserved water rights of three Indian reservations and two federal agencies, through the Reserved Water Rights Compact Commission
- Distributing over \$44 million in earnings and interest directly to the public schools and other entities (which in the public school system equated to over \$270 per student), through the Trust Land Management Division
- Ensuring that the approximately 90 high hazard dams in Montana are properly constructed, maintained, and operated, through the Water Resources Division

I hope you will find this report both informative and useful. Please let me know how you feel we are doing and what we can do to serve you better.

Sincerely,

A handwritten signature in cursive script, reading "Arthur R. Clinch".

Arthur R. Clinch
Director

INTRODUCTION

INTRODUCTION

"Helping to ensure Montana's land and water resources provide benefits for present and future generations" is the mission of the Montana Department of Natural Resources and Conservation (DNRC).

First established in 1971 as a result of the Executive Reorganization Act of 1971, the department provides leadership in managing the state's natural resources. In 1995 the department was reorganized as part of the reorganization of Montana's natural resource and environmental agencies. It is presently responsible for promoting the stewardship of Montana's water, soil, forest, and rangeland resources and for regulating forest practices and oil and gas exploration and production.

Department Organization

The director of the Department of Natural Resources and Conservation is Arthur R. "Bud" Clinch.

As shown in Figure 1, eight boards and commissions are attached to the department. Four of them — the State Board of Land Commissioners, Reserved Water Rights Compact Commission, Board of Oil and Gas Conservation, and Board of Water Well Contractors — have decision-making authority. The other four — the Resource Conservation Advisory Council, Rangeland Resources Committee, Grass Conservation Advisory Committee, and Drought Advisory Committee — act in an advisory capacity only.

The department is organized into seven divisions:

- Centralized Services Division
- Conservation and Resource Development Division
- Forestry Division
- Oil and Gas Conservation Division
- Reserved Water Rights Compact Commission
- Trust Land Management Division
- Water Resources Division

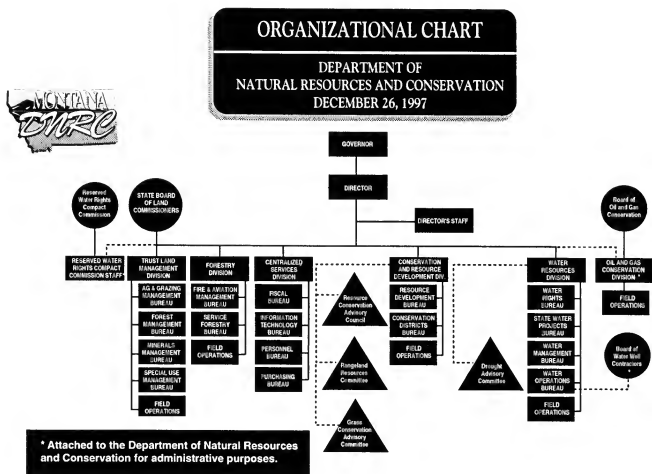
Two of the divisions — the Oil and Gas Conservation Division and the Reserved Water Rights Compact Commission — are attached to the department for administrative purposes only.

Division Duties and Responsibilities

Centralized Services

The Centralized Services Division provides administrative and operational support to all divisions. Support services include financial management, purchasing, data processing, personnel, legal, reception, and mail. The division coordinates

Figure 1



information services and prepares publications and graphic materials for printing. Trust revenues are collected and distributed, and ownership records for trust and nontrust lands are maintained.

Conservation and Resource Development

The Conservation and Resource Development Division coordinates, supervises, and provides financial and technical assistance to Montana's 58 conservation districts, and it provides technical, financial, and administrative assistance to public and private entities to complete projects that put renewable resources to work, increase the efficiency with which natural resources are used, or solve recognized environmental problems. The division receives advice and guidance from three attached bodies: the Resource Conservation Advisory Council, the Rangeland Resources Committee, and the Grass Conservation Advisory Committee.

Forestry

The Forestry Division protects the state's forested and nonforested watershed lands from wildfire; provides aviation services; operates a nursery and provides shelterbelt, windbreak, wildlife habitat improvement, reclamation, and reforestation plantings on state and private lands; and regulates forest practices and wildfire hazards created by logging or other forest management operations on private lands.

Oil and Gas Conservation

The Board of Oil and Gas Conservation and its technical support staff are attached to the department for administrative purposes. The quasi-judicial board is comprised of seven members consisting of industry representatives, landowners, and an attorney. They administer Montana's oil and gas laws and the federal Underground Injection Control Program to promote conservation and prevent waste in the recovery of these resources through regulation of oil and gas exploration and production. The board and its staff issue drilling permits; classify wells; establish well spacing units and land pooling orders; inspect drilling, production, and seismic operations; investigate complaints; conduct engineering studies; and collect and maintain complete well data and production information.

Reserved Water Rights Compact Commission

The Reserved Water Rights Compact Commission, which is also administratively attached to the department, was created by the legislature in 1979 as part of the water rights adjudication effort. Commissioners are appointed by the governor, the attorney general, the speaker of the House of Representatives, and the president of the Senate. The nine-member commission and its support staff negotiate water rights with Indian Tribes and federal agencies to establish a formal agreement on the amount of water to be allocated to each interest.

Trust Land Management

The Trust Land Management Division is responsible for managing the surface and mineral resources of forested, grazing, agricultural, and other classified state trust lands to produce revenue for the benefit of Montana's public schools and other endowed institutions. The State Board of Land Commissioners oversees the administration of the state trust land in Montana, as directed by the Montana Constitution. This board consists of Montana's top elected officials: the governor, superintendent of public instruction, secretary of state, attorney general, and state auditor.

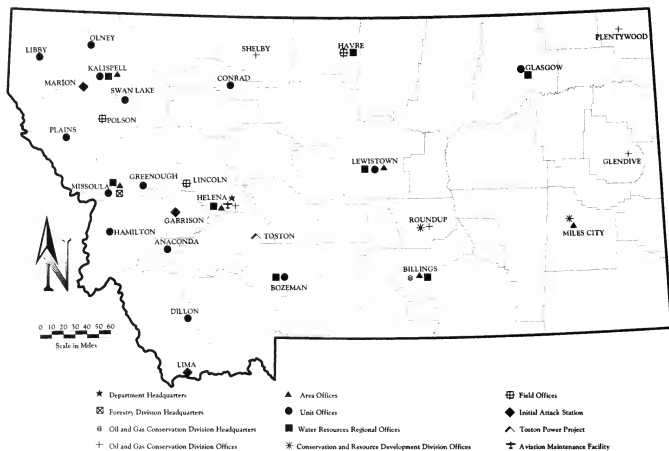
Water Resources

The Water Resources Division is responsible for many programs associated with the uses, development, and protection of Montana's water. The division also develops and recommends water policy to the director, governor, and legislature. The division consists of an administration unit and four bureaus: water management, water rights, state water projects, and water operations. Attached to the Water Operations Bureau is the 6-member Board of Water Well Contractors, a quasi-judicial board that can issue, suspend, or revoke licenses; promulgate rules and regulations; investigate complaints; and hold disciplinary hearings. The 18-member Drought Advisory Committee is also attached to the Water Resources Division.

Field Offices

Although the department headquarters is located in Helena, the field operations for the department's programs are performed through field offices and personnel located in 28 different communities (see Figure 2). Included are both full time and seasonal employees from the Conservation and Resource Development, Forestry, Oil and Gas Conservation, Trust Land Management, and Water Resources Divisions.

Figure 2
Location of Department of Natural Resources and Conservation Offices



Financial Information

Table 1 presents overall expenditures and funding of the Department of Natural Resources and Conservation for Fiscal Year (FY) 1998. Information on two of the department's funding sources, the Resource Indemnity Tax and the Coal Severance Tax, can be found in Appendix A.

Table 1
Department of Natural Resources and Conservation
Expenditures and Funding
in Fiscal Year 1998

	Budgeted	Nonbudgeted	Total
EXPENDITURES			
Personal Services	\$17,969,723		\$17,969,723
Operating Expenses	24,834,366	\$18,437	24,852,803
Equipment	384,252		384,252
Capital Outlay	115,310		115,310
Local Assistance	146,000		146,000
Grants	1,504,628		1,504,628
Transfers	355,419	5,123,750	5,479,169
Debt Service	186,105	<u>7,396,044</u>	<u>7,582,149</u>
TOTAL	<u>\$45,495,803</u>	<u>\$12,538,231</u>	<u>\$58,034,034</u>
FUNDING			
General Fund	\$14,731,678		\$14,731,678
State Special Revenue Fund	13,072,350	\$1,544,240	14,616,590
Federal Special Revenue Fund	16,895,307		16,895,307
Debt Service Fund		10,975,554	10,975,554
Capital Projects Fund	55,462		55,462
Proprietary Fund	<u>759,443</u>		<u>759,443</u>
TOTAL	<u>\$45,514,240</u>	<u>\$12,519,794</u>	<u>\$58,034,034</u>

PROGRAMS

CENTRALIZED SERVICES DIVISION

Provides managerial, administrative support, information, computer, legal, and personnel services to all divisions of the department.

The Centralized Services Division provides managerial and legal services to the department through the Director's Office. The division also manages all financial activities, contracting, and procurement; oversees personnel policies and functions; coordinates computer systems; performs public information and media relations tasks; produces publications and graphic materials; and provides general administrative support services. Support services include payroll, data entry, reception, and mail. Fiscal responsibilities include trust revenue collection and distribution, as well as bond and loan accounting. In Fiscal Year 1998, fiscal functions and procurement and contracting functions were segregated into two separate bureaus.

A five-year plan developed by the Information Technology Bureau and representatives from all divisions sets forth the primary objectives of networking DNRC field offices and moving mainframe data to a network platform. Migration away from Digital mini-computers to a single, multi-user computer platform was completed to eliminate the need to support the two separate systems that resulted from reorganization.

The Information Services Section provided editing, illustration, design, and layout for numerous publications ranging from general interest brochures to highly technical research reports. Public information action plans were completed with four divisions to assist with information dissemination. Posters highlighting division or bureau activity were created, conveying information to the public and enhancing the cohesiveness of department offices located throughout the state. More than 10,000 color copies were produced in-house, and the section created many color, computerized maps illustrating natural resource conditions and management alternatives.

The Personnel Bureau continued to serve the department with the reclassification of 80 positions during the year and the evaluation and filling of more than 60 positions. The bureau, which was reorganized from three payroll technicians to two, integrated all personnel files into a file bank. Finalized policies were distributed for performance appraisals and nonexempt compensatory time. Training was provided throughout the department on the performance appraisal policy and sexual harassment prevention. Bureau staff processed more than 13,000 paychecks, along with providing information and advice to employees regarding policy issues and benefits.

Almost 15,000 payments were processed during the year by the Fiscal Bureau, which also coordinated one general obligation bond sale totaling \$2 million. More than 30,000 checks were received, deposited, and distributed within trust, federal, and state accounts.

The Purchasing Bureau updated and expanded a comprehensive manual to assist other divisions in making legal, cost-effective purchases and contracts.

CONSERVATION AND RESOURCE DEVELOPMENT DIVISION

Provide technical and financial assistance to local governments, state agencies, and private citizens for the conservation, development, protection, and management of the state's natural resources.

The Conservation and Resource Development Division (CARD) helps manage natural resources and finances conservation, resource management, and reclamation activities. The division has 19.5 full-time employees who administer the work of the Conservation Districts Bureau and the Resource Development Bureau.

Conservation Districts Bureau

Under state law, the Conservation Districts Bureau (CDB) is responsible for assisting Montana's conservation districts and state grazing districts. A conservation district (CD) is a legal subdivision of state government that (1) develops and carries out long-range programs that will conserve and improve soil and water resources within its boundaries, and (2) encourages maximum participation by the general public and all local public and private agencies to fulfill this purpose.

State law also directs the department to supervise and coordinate the formation and operation of grazing districts. Grazing districts are cooperative, nonprofit groups that set up permitting systems to aid in the management of grazing lands where land ownership is intermingled in order to conserve, protect, restore, and properly utilize grass, forage, and range resources.

CDB works with the people of Montana on these 10 areas of conservation and resource management.

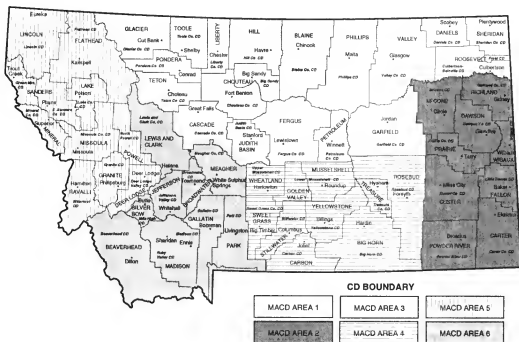
- Conservation district supervision and assistance
- Rangeland management coordination
- Grazing district supervision and assistance
- Stream protection
- Watershed efforts and projects
- Natural resource conservation education activities
- Riparian management
- Grant and loan programs
- Resource conservation and development (RC&D) areas
- Salinity control

Conservation District Supervision and Assistance

The bureau provides administrative, legal, and financial assistance to Montana's 58 conservation districts (see Figure 3) to help them identify and address local natural resource concerns. Because natural resource challenges are becoming more complex, conservation districts are requiring more complex technical assistance. The 1997 legislature authorized several programs to provide districts with services and programs needed to carry out their statutory responsibilities effectively. To help with their legal needs, CDB solicited proposals and hired a law firm to provide

specific legal assistance to conservation districts. The firm will represent conservation districts on a variety of legal issues when assistance cannot be obtained through normal channels. A county attorney training session was held on 310 issues and conservation district laws, and a law firm was hired to conduct legal research for a large rural water project involving Valley, Daniels, Sheridan, and Roosevelt Conservation Districts.

Figure 3. Montana's Conservation Districts



The Conservation Districts Bureau conducted or participated in eight conservation district employee workshops and three new supervisor orientations. The workshops cover conservation district legal responsibilities in many aspects of conservation district law. Fact sheets were developed on conservation district financial procedures, supervisor elections, and open meeting laws and minutes. A records management guide for conservation districts was developed in conjunction with the Montana Historical Society.

The Resource Conservation Advisory Council (RCAC), which consists of seven members serving at the pleasure of the governor, provides advice and assistance on conservation matters. Current RCAC members are:

Dennis DeVries	Polson	Representing Conservation Districts
Jamie Doggett	White Sulphur Springs	Representing Western Montana
Sever Enkerud	Glasgow	Representing Grazing Districts
Robert Fossum	Richland	Representing Eastern Montana
Ellis Hagen	Westby	Representing the General Public
Marianne Hanser	Billings	Representing South Central Montana
Tom Stelling	Fort Shaw	Representing North Central Montana

The Conservation Districts Bureau also works with the Montana Association of Conservation Districts (MACD) and the National Association of Conservation Districts (NACD) to address natural resource concerns.

Watershed Efforts and Projects

Through the capacity-building program, conservation districts have identified the need for watershed planning as a high priority goal. Conservation districts, as the local entity responsible for addressing nonpoint source (NPS) water pollution, will play a key role in developing local watershed plans. CDB participates on the Watershed Coordinating Council, a group of state and federal agencies and private organizations that coordinates programs in Montana that address aspects of watershed management.

Rangeland Management Coordination

The rangeland resource program has four major areas of emphasis. They include:

- Working with county range committees, conservation districts, and producer groups to foster sound rangeland management
- Encouraging coordination and cooperation between private, state, and federal entities involved in range management
- Administering the rangeland improvement loan program
- Co-sponsoring the Governor's Range Tour, Winter Grazing Seminar, and Youth Range Camp

The program receives guidance from the Rangeland Resource Executive Committee, which consists of six persons involved in ranching who are appointed by the governor. Current members are:

Robert E. Lee, Chair	Mark Davies	Les Gilman
Judith Gap	Chinook	Alder
Quinn Haughian	John Hollenback	Michael Lane
Terry	Gold Creek	Three Forks

CD staff work to strengthen local grazing management programs by helping sponsor workshops, tours, and demonstration projects. Five "Monitoring for Success" workshops were held in cooperation with Beaverhead CD, Broadwater CD, Dawson County CD, Phillips CD, and Teton County CD. These workshops were attended by 250 producers. The bureau co-sponsored the 13th Annual Winter Grazing Seminar in Conrad in January 1998. The Governor's Range Tour took place in the Lewistown area in September 1997, and Montana Range Days were held in Columbus in June 1998.

Also in June, the Montana Youth Range Camp provided an opportunity for youngsters ages 13 to 18 to develop an appreciation and understanding of Montana's grazing resources. This year's camp hosted 47 campers, many of whom were sponsored by conservation districts from throughout the state. DNRC assisted Judith Basin Conservation District with the camp.

A loan program was started in 1979 for the purpose of improving rangelands in Montana. To date, 183 applications have been received for rangeland improvement loans totaling \$3,251,124. Currently, 40 loans totaling \$508,610 are in repayment status. A typical rangeland loan project involves drilling a well and installing underground water lines to supply stock tanks. These stock tanks are usually located in areas where water is insufficient or unsuitable for livestock. The

projects are sometimes combined with cross fencing and an overall grazing plan to improve the rangeland. Over 700,000 acres of Montana rangeland have been improved using funds from this program.

Grazing District Supervision and Assistance

State law provides for the creation of cooperative, nonprofit grazing districts and sets up a permitting system that aids in the management of grazing lands where ownership is intermingled. In its administration of the Montana Grass Conservation Act (grazing district law), the bureau advises, supervises, and coordinates the formation and operation of these grazing districts. Uniform plans that conform with recognized conservation practices are developed for the use of lands within the boundaries of the districts. The 27 state grazing districts represent 1,353 permittees and cover 10,501,070 acres of land.

In FY 1997, the Montana Association of State Grazing Districts successfully requested legislation to create a Montana Grass Conservation Advisory Committee. The committee was created in FY 1998 and is composed of these seven employees and board members of local grazing districts:

Jim Rath, Chair	Lavina
Sandra Brown	Terry
Vicki Dunaway	Billings
Lee Iverson	Winnett
Dwayne Ozark	Glasgow
Gary Unruh	Chinook
Bud Clinch	Director, DNRC

The committee met six times in FY 1998 to analyze grazing district issues, prepare findings, and recommend statutory changes. A summary report of the findings and recommendations will be completed by October 1998.

Stream Protection

CDB provides administrative assistance, training, and legal opinions to conservation districts to help them administer the Natural Streambed and Land Preservation Act, commonly referred to as the "310 law." Under this law, any private entity proposing a project that will alter or modify the bed or banks of a stream must obtain a permit.

In FY 1998, CDB updated and reprinted the *Guide to Stream Permitting in Montana* and compiled and printed an informational bulletin containing the law, rules, and attorney general's opinions. A training session pertaining to legal issues surrounding the 310 law was held for county attorneys in December 1997. Using funds allocated by the 1997 legislature, two engineering firms were hired under contract to provide conservation districts with technical review on difficult or complex 310 projects, and another engineering firm was hired to develop a field review guide for conservation districts and voluntary best management practices (BMPs) for a variety of stream project types.

CDB is providing technical support to conservation districts' efforts to consolidate permit application forms and procedures of various government agencies regarding stream projects. Seven agencies are cooperating to develop a joint application form

to ease the burden on applicants proposing to construct projects in streams. The new form will be tested in late summer 1998 and should be adopted by all agencies by January 1999.

Natural Resource Conservation Education Activities

This program provides grant funding and policy guidance for resource conservation education programs. The bureau assists conservation districts in sponsoring adult education, elementary and secondary school activities, and several annual events: the Envirothon, Youth Range Camp, and Natural Resources Youth Camp. Program goals are to promote discussion of resource issues and provide the knowledge and skills necessary to make decisions regarding the management, protection, and wise use of our natural resources.

CDB administered a grant authorized by the 1997 legislature to conduct the 1998 Envirothon. The Youth Range Camp and the Natural Resources Youth Camp operate on donations and other grants.

Mini-grants of \$500 each are available to educators statewide, enabling teachers to develop environmental education projects around local resource issues. A total of 20 mini-grant projects were funded in FY 1998 for \$10,000. Examples of four mini-grant projects follow.

- Flathead Conservation District sponsored a grant to reproduce a forestry tour book for the Family Forestry Expo. This intensive, all-day course targeted fifth-graders in Flathead, Lincoln, Sanders, and Lake Counties. Students were introduced to a wide range of forestry issues, from fire management to wild owl observations.
- Valley County Conservation District sponsored a grant for a Riparian Ecology Outdoor Workshop, and 100 to 150 fifth-grade students from the seven public and private schools in Valley County participated. Students rotated through six stations covering soils, riparian ecology, wildlife, plants, archeology, and minimum impact.
- Lower Musselshell Conservation District sponsored a grant for the Roundup Elementary School Library. Grant funds were used to purchase natural resource and watershed education textbooks and resource materials to complement an outdoor "wetland" classroom constructed on the site of an abandoned lagoon.
- Cascade County Conservation District sponsored a grant for Charles M. Russell High School to purchase replacement chemicals for water quality testing kits. One hundred and thirty students spent eight weeks studying environmental issues, with an emphasis on water pollution. Students are involved in a national program to monitor the water quality of the Missouri River.

Riparian Management

Proper management of riparian areas is critical to maintaining water quality, stream bank stability, and flood control. Since 1988, the bureau has coordinated a com-

prehensive riparian management program involving conservation districts, federal and state agencies, and private organizations. The purpose of the program is to promote proper riparian management by emphasizing the economic, ecological, and hydrologic benefits of these areas to landowners.

Program efforts for FY 1998 included:

- Holding five range monitoring workshops attended by 250 landowners
- Providing ten grants to conservation districts
- Assisting six conservation districts with stream assessments
- Updating and reprinting the brochure, *Tips on Land and Water Management for Small Farms and Ranches in Montana*

Grants have been received and private funds raised to pay for some of these projects.

Grant Programs

The bureau administers three grant programs (besides the conservation education mini-grants).

Conservation District Project Grants

The conservation district project grant program provided \$200,000 in 1998 from coal severance tax funds for projects and activities that satisfy the natural resource management mandates on CDs. Funds are used to correct stream bank erosion and sedimentation problems; administer new technology; and conduct water development and management projects, youth and adult educational activities, and equipment rental programs. All projects funded in FY 1998 are listed in Table 2, and the allocation of funds is shown in Figure 4.

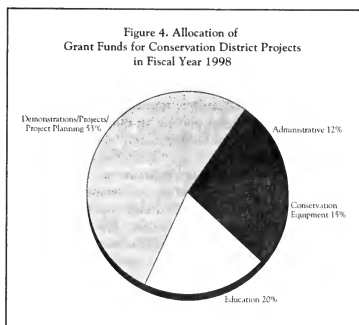


Table 2
Conservation District Project Grants Awarded in FY 1998

Conservation District	Project	Amount
Big Horn	Outdoor Classroom	\$1,433
Big Sandy	Office Building/Maintenance	15,000
Blaine County	Milk River Irrigation Water Management	3,000
Carbon #1	Red Lodge Path Green Belt	5,450
Carbon #2	Weed Control – Sprayer Purchase	1,900
Carbon #3	Cooney Reservoir Auto Gage	5,000
Cascade County #1	GIS Mapping	1,729
Cascade County #2	Ashuelot Bench Groundwater Plan	7,000
CDB #1	Conservation Education Mini-Grants	10,000
CDB #2	Workshop Expenses	5,000
CDB #3	Supervisor Travel Expenses	6,000
CDB #4	310 Committee Expenses	1,000
Daniels County	Wheat Processing Plant	8,000
Deer Lodge Valley #1	Deer Lodge Wastewater Project	10,000
Deer Lodge Valley #2	Clark Fork River Bank Stabilization	3,000
Fergus County	Big Spring Creek Restoration	6,000
Flathead	Wetland Mitigation Assistance	8,560
Jefferson Valley	Flow Meter for Jefferson River	3,000
Judith Basin	Youth Range Camp 1998	3,000
Lake County	Carbon Offset Credits	5,000
Lewis and Clark County #1	Governor's Range Tour 1998	3,500
Lewis and Clark County #2	Willow Creek Resource Inventory	10,000
Lincoln #1	310 Monitoring Phase 2	7,086
Lincoln #2	310 Monitoring Phase 3	8,516
Lower Musselshell #1	Careless Creek Weed Control	2,000
Lower Musselshell #2	Wetlands Education	4,589
Lower Musselshell #3	Careless Creek Watershed Restoration	5,000
Madison	Natural Resources Youth Camp	3,000
McCone	Coordinated Resource Management (CRM) Coordinator	5,000
Meagher County #1	MACD Employee Organization Committee	1,800
Meagher County #2	Smith River Inventory	800
Mineral County	Big Creek Restoration Project	5,000
Pondera County	Winter Grazing Seminar	4,340
Prairie County	Buffalo Rapids Priority Area	10,000
Richland County	Ag and Water Booklet Reprint	3,985
Roosevelt County	Irrigation Efficiency Evaluation	6,000
Valley County	Plant Materials Center Plot Maintenance	4,000
Yellowstone #1	Yellowstone/Clark Fork Tour	2,410
Yellowstone #2	Bike Path Improvements	5,000
Yellowstone #3	Yellowstone River Bank Stabilization	3,600
TOTAL		\$204,698

Administrative Grants

The bureau also receives \$150,000 per year from the resource indemnity tax (RIT) trust fund for grants to districts whose county mill levies are inadequate to support district operations. These grant funds are used for administrative purposes. In FY 1998, grants were awarded to 37 CDs.

More information on coal severance tax and RIT funding is presented in Appendix A.

Watershed Planning Assistance Grants

This grant program was authorized by the 1997 legislature. The purpose is to assist conservation districts and affiliated local watershed groups with expenses associated with watershed planning. Funds can be used for collection of baseline resource information, facilitators, development of a watershed management plan, training, educational efforts, and incidental costs associated with watershed planning. Nine grants totaling \$50,000 were authorized in FY 1998. Projects funded are listed in Table 3.

Table 3
Watershed Planning Assistance Grants Awarded in FY 1998

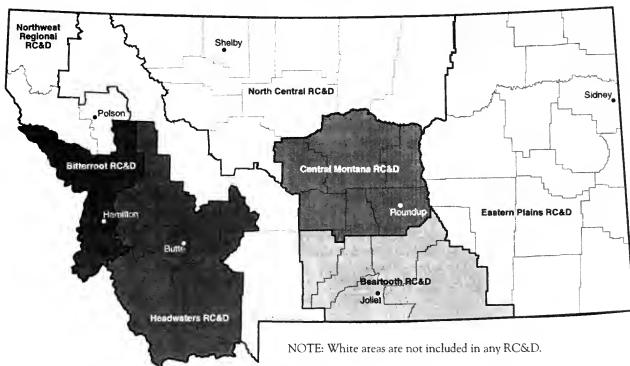
Conservation District	Project	Amount
Fergus County	Upper Judith River and Warm Springs Creek	\$ 4,000
Green Mountain	Prospect Creek	\$ 5,000
Lake County (on behalf of Lake County, Flathead, and Lincoln CDs)	Northwest Montana Watershed Plan	\$15,000
Lincoln	Grave Creek	\$ 3,750
McCone (on behalf of Northeast CDs)	Lower Missouri Watershed	\$ 7,650
Mineral County	Tamarack Creek Watershed	\$ 2,500
Park #1	Shields Valley Watershed	\$ 5,000
Park #2	Upper Yellowstone	\$ 2,100
Ruby Valley	Ruby River Watershed	\$ 5,000

Resource Conservation and Development Areas

In a cooperative effort with the U.S. Natural Resources Conservation Service (formerly named the Soil Conservation Service), the bureau has taken a lead role in assisting in activities of the state resource conservation and development (RC&D) coordinator and the Central Montana RC&D Area. The state RC&D coordinator is currently helping develop key issues and providing direct assistance to the RC&Ds in Montana (see Figure 5). The Central Montana RC&D was involved in these activities.

- Implementation of a multi-school interactive television network, partially funded by a Rural Utilities Service Grant from the U.S. Department of Agriculture. The project involves facility installation, participant training, curriculum development, scheduling, and public awareness.
- Facilitation of a multi-county dry-hydrant fire suppression demonstration project in rural areas of the RC&D. Funding is partially provided from a Reclamation and Development Grant to Carbon Conservation District.
- Development of a Central Montana RC&D website for public information and education. The project will utilize area high school students for production.
- Development of a multi-district wetlands monitoring and educational initiative. The project will use teachers and other professionals in a classroom setting to collect baseline habitat and water quality information from various wetlands.
- Education of area businesses about methods and benefits of the Small Business Administration's "Hub Zone" program, which may provide bidding preferences when the area participates in federal government contracting.

Figure 5
Resource Conservation and Development Areas in Montana

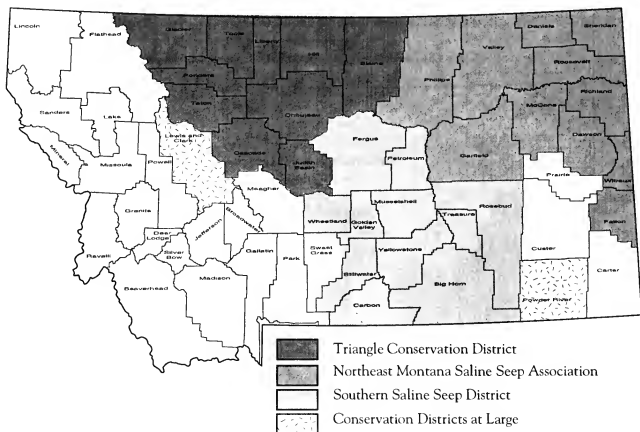


Salinity Control

The Montana Salinity Control Association (MSCA) is a group of conservation districts established to manage and reclaim saline seeps and agriculturally caused water quality problems on an individual farm and/or watershed basis. MSCA originated in 1979 in 9 counties and now serves 34 (see Figure 6). MSCA is partially funded from mineral taxes administered by CARDD. Through the Conservation Districts Bureau, MSCA received \$200,000 in FY 1998. Additional funding comes from landowner and user fees for projects. Outside funds have been coming into the program since 1983.

Conservative estimates indicate that over 300,000 acres in Montana are affected by salinity. MSCA has developed reclamation plans for 692 sites on 97,898 acres to address 12,270 acres of salinized land that have been taken out of crop production. Four salinity-based watershed projects, ranging in size from 70,000 to 500,000 acres, are completed or are in progress. Each watershed project has a local advisory group that contributes funds and provides coordination between landowners and technical agencies. CDB is involved in the organization of individual and area watershed projects through local conservation districts.

Figure 6.
Montana Salinity Control Association



Resource Development Bureau

The Resource Development Bureau (RDB) administers several grant and loan programs and provides assistance to conservation districts for the administration of water reservations. The programs include:

- Reclamation and Development Grants Program
- Renewable Resource Grant and Loan Program
 - Public Grants
 - Emergency Grants
 - Private Grants
 - Private Loans
 - Public Loans
- State Wastewater Revolving Fund Loan Program
- Safe Drinking Water Revolving Fund Loan Program
- Treasure State Endowment Loan Program
- Conservation District Water Reservations

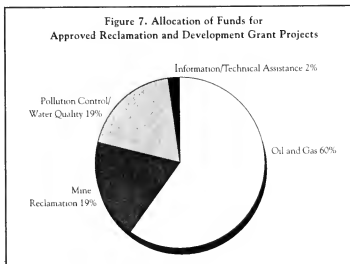
FY 1998 was a successful year for these programs. Over 300 contracts were being actively administered, and approximately \$15 million in grant and loan funds was disbursed for projects throughout the state.

Reclamation and Development Grants Program

The Reclamation and Development Grants Program (RDGP) is a state-funded grant program designed to fund projects that "*indemnify the people of the state for the effects of mineral development on public resources and that meet other crucial state needs serving the public interest and the total environment of the citizens of Montana*" (MCA 90-2-1102). The program was established in 1987. Any department, agency, board, commission, or other division of state government or any city, town, county, or other political subdivision or tribal government within the state may apply for a RDGP grant.

The funding source for this program is interest income from the RIT trust fund and mineral taxes. Grants of up to \$300,000 are available per application, and a total of \$3 million in grant funds is available each biennium. In FY 1998, grant agreements were executed for all grants awarded by the 1997 legislature. Because the Nancy Lee Mine Complex reclamation project required only \$84,640 (instead of nearly \$300,000), the Deer Lodge conservation project was funded in the amount of \$100,000.

In FY 1998, the bureau administered 45 RDGP contracts, and \$638,644 was disbursed to authorized grant projects. The allocation of funds is illustrated in Figure 7.



The Nellie Grant Mine project is one example of an abandoned hard rock mine site being reclaimed in FY 1998. This site, located 13 miles southwest of Helena, is severely contaminated by heavy metals in groundwater, surface water, and soils. The Department of Environmental Quality (DEQ) Mine Waste Cleanup Bureau will use \$288,040 in RDGP funds to remove and dispose of tailings/waste rock in a mine waste repository.

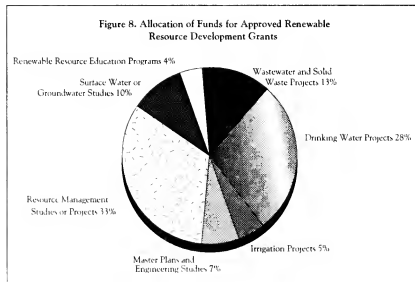
Reclamation cleanup and remediation projects continue to be the focus of RDGP. In FY 1998, a total of 21 grant applications were received requesting over \$5.5 million (see Table 4), which is nearly twice the amount of funds that will be available. Eighteen percent of the applications received deal directly with abandoned oil and gas or hard rock/sand and gravel operations.

Renewable Resource Grant and Loan Program

The Montana Legislature established what is now called the Renewable Resource Grant and Loan Program in 1975 to promote the development of our renewable natural resources. Funding from RIT interest and the mineral tax is available to purchase, lease, plan, design, construct, or rehabilitate projects that conserve, manage, use, develop, or preserve land, water, fish, wildlife, recreation, and other renewable resources. General obligation bonds and coal severance tax bonds are issued to fund the loan programs. For local governments, these loans are primarily for drinking water, wastewater, and irrigation projects. Private loans are used primarily to finance the purchase of new irrigation systems or the rehabilitation of existing irrigation systems. Various grants are available for both public and private entities. A minimum of \$2 million is allocated for public and private grants each biennium.

Public Grants

Up to \$100,000 is available per grant application. In FY 1998, a total of 64 renewable resource grant contracts were administered by the bureau, and \$921,925 was disbursed. Grant agreements were executed for all but four of the grants awarded by the 1997 legislation. The allocation of funds is shown in Figure 8.



One example of a 1998 renewable resource grant is Fort Shaw Irrigation District's irrigation efficiency and water quality project. A \$100,000 grant will be used to automate the district's diversion structure for improved flow control, to install a gauging station for improved data collection, and to line approximately 3,400 feet of irrigation canal where severe seepage loss occurs. The project will result in reduced diversions from the Sun River and help control saline seeps that are ruining croplands and degrading water quality in the Sun River drainage area.

Also, in May 1998, the department received 62 grant applications requesting \$5.9 million and 6 loan applications requesting \$6.8 million. These grant and loan applications, which request funding in FY 1999 and FY 2000, are listed in Table 5.

Table 4
Reclamation and Development Grants Program
1998 Applications

Applicant Name	Project Name	Grant Request	Total Project Cost
Butte-Silver Bow Local Government	Mining City Mineyard Preservation and Enhancement	\$ 297,104	\$ 579,867
Butte-Silver Bow Local Government	Upper Clark Fork Basin: Superfund Technical Assistance	95,236	232,841
Fergus County Conservation District	Central Montana Artesian Basin Groundwater Project	283,113	430,589
Flathead County, Board of County Commissioners	Assessment of Aggregate Resources in Flathead and Missoula Counties	166,553	252,311
Jefferson County	Water Quality and Quantity Management Improvement Project for Jefferson County	300,000	300,000
Lewistown, City of	Source Location of Hazardous Organic Contaminants, Big Spring Creek Drainage	290,610	402,730
Montana Department of Environmental Quality	Wetland Inventory for Montana	300,000	652,400
Montana Department of Environmental Quality, Mine Waste Cleanup Bureau	Frohner Mine Reclamation Project	300,000	500,000
Montana Department of Environmental Quality, Mine Waste Cleanup Bureau	Great Republic Smelter Reclamation Project	300,000	600,000
Montana Department of Environmental Quality, Mine Waste Cleanup Bureau	Silver Bow Creek, Streamside Tailings, Remedial Action (1)	300,000	2,700,000
Montana Department of Environmental Quality, Mine Waste Cleanup Bureau	Silver Bow Creek, Streamside Tailings, Remedial Action (2)	300,000	2,700,000
Montana Department of Environmental Quality, Mine Waste Cleanup Bureau	Toston Smelter Reclamation Project	300,000	600,000
Montana Department of Environmental Quality, Watershed Management Section	Implementing Nonpoint Source Management and Total Maximum Daily Loads	300,000	3,128,134
Montana Department of Natural Resources and Conservation, Board of Oil and Gas Conservation	1999 "A" Orphaned Well Plug and Abandonment, and Site Restoration	300,000	325,463
Montana Department of Natural Resources and Conservation, Board of Oil and Gas Conservation	1999 "B" Orphaned Well Plug and Abandonment, and Site Restoration	300,000	328,461
Montana Tech of the University of Montana	Champion International Gravel Pit Reclamation Project	88,230	168,971
Park Conservation District	Upper Yellowstone River Cumulative Effects Investigation	299,940	639,880
Toole County	North Toole County Reclamation Project	300,000	333,016
Toole County	Toole County Plugging and Abandonment, Aid to Independent Small Oil Operators	300,000	311,465
Townsend, City of	East Pacific Mine Reclamation	202,500	252,500
University of Montana, Department of Geology	Remediation of Groundwater at Abandoned Mine Sites: Application of Permeable Reactive Wall Technology	256,266	366,724
TOTALS		\$5,579,552	\$ 15,805,352

Table 5
Renewable Resource Grant and Loan Program - 1998 Applications

Applicant Name	Project Name	Grant Request	Loan Request	Total Project Cost¹
Big Timber, City of	Lagoon Reconstruction and Lining	\$100,000		\$1,796,275
Bitterroot Irrigation District	Water Conservation and System Improvement	99,650		322,750
Boulder, Town of	Water System Improvement	100,000	907,000	1,917,000
Broadwater Conservation District	Slim Sam Riparian Area Implementation	25,522		45,417
Brockton, Town of	Water and Wastewater Systems Improvements	100,000		1,020,250
Buffalo Rapids Project	Pump Discharge Line Efficiency Improvement	91,622		193,135
Canyon Creek Irrigation District	Canyon Lake and Wyant Lake Restoration Projects	244,000		319,000
Cascade County Conservation District	Muddy Creek Restoration and Water Quality Improvement	77,000		208,220
Chinook Division Irrigation Association	Rehabilitation and Betterment of Water Conveyance System	100,000		137,590
Columbia Falls, City of	Sewer Treatment Plant Upgrade	200,000		3,577,000
Corvallis County Sewer District	Upgrade and Expansion of Wastewater Treatment Facility	100,000		816,520
Cut Bank, City of	Water System Improvement	100,000		3,234,250
Daly Ditches Irrigation District	Republican Canal Diversion Dam Replacement	100,000	730,691	878,786
Denton, Town of	Wastewater Treatment Project	100,000		943,400
Drummond, Town of	Sanitary Sewer Rehabilitation Project	100,000		585,700
East Helena, City of	Wastewater Treatment Facility Improvement	100,000		959,218
Ekalaka, Town of	Ekalaka Water Source Improvement	100,000		115,000
Elk Meadow Ranchettes County Water District	Water System Improvement	100,000		515,186
Eureka, Town of	Wastewater Collection, Treatment, and Disposal Improvements	100,000		1,380,000
Eureka, Town of	Water System Facility Plan	35,000		35,000
Fort Shaw Irrigation District	Water Quality and Quantity Improvement	78,650		212,090
Frenchtown Irrigation District	Irrigation System Water Use and Water Quality Improvement	32,900		106,090
Garfield County Conservation District	Rehabilitation of Irrigation Diversion Dam and Outlet Works	100,000		110,500
Geraldine, Town of	Wastewater System Improvement	50,000		811,007
Glasgow Irrigation District	Phase 1- Vandalia Diversion Dam Rehabilitation	56,000		66,000
Glasgow, City of	Combined Sewer Separation Project	100,000		1,600,000
Glen Lake Irrigation District	Costich Dam Improvement Project	100,000		113,976
Havre, City of	Source-Water Delineation for Havre and Seeley Lake	100,000		141,120
Hebgen Basin/West Yellowstone Refuse District	Composting Facility for Municipal Solid Waste	99,425	2,080,000	2,338,483
Homestead Acres County Water and Sewer District	Water System Improvement	100,000		433,400
LaCasa Grande Estates Water and Sewer District	New Water Supply System	100,000		1,045,000
Lake County	Class I Airshed Protection	83,470		248,891
Lake County Conservation District	Forestry Implementation Project	100,000		248,001
Lewis and Clark County Water Quality Protection District	Helena Area Groundwater Quality Monitoring Network	100,000		125,773

1. The total cost of most projects includes a grant request, some loan requests, and other funds not listed here.

Table 5
Renewable Resource Grant and Loan Program - 1998 Applications (continued)

Applicant Name	Project Name	Grant Request	Loan Request	Total Project Cost ¹
Livingston, City of	Yellowstone Street to Main Street-Ditch Improvement	64,000		80,000
Madison County	Harrison Wastewater System Improvement	100,000		1,600,000
Malta Irrigation District	Repair and Modification of Dodson Diversion Dam	100,000	2,274,950	2,374,950
Milk River Project Water Users	St. Mary Siphon Repair	100,000		133,000
Missoula, City of	East Reserve Street Phases II & III Sewer System Improvement	100,000		5,215,107
Missoula, City of	Rattlesnake Creek Floodplain Restoration and Control Work	74,000		88,000
Montana Department of Environmental Quality	Direct Planning Grants to Small Communities in Need	100,000		181,818
Montana Department of Natural Resources and Conservation	Deadman's Basin Water Quality Improvement	100,000	401,100	609,700
Montana Department of Natural Resources and Conservation	Missouri Pipe Span Rehabilitation Project	100,000	409,426	509,426
Montana Department of Natural Resources and Conservation	Precipitation Relationships for Montana Design Flood Guidelines	67,000		123,350
Montana Department of Natural Resources and Conservation	Seepage Monitoring Program	100,000		134,290
Neihart, Town of	Water Distribution Improvement	97,770		101,720
Park Conservation District	Upper Yellowstone River Cumulative Effects Investigation	299,940		639,880
Park County	Hydrogeological Reconnaissance of the Paradise Valley	100,000		215,900
Petroleum County Conservation District	Musselshell River Assessment and Monitoring Plan	83,250		1,147,755
Rae Water and Sewer District	Wastewater Treatment System Improvement	100,000		971,700
Roosevelt County Conservation District	Fort Peck Assiniboine and Sioux Rural Water Supply Project	82,109		242,109
Sage Creek Water District	"A - Closed" Watershed Classification	18,500		20,500
Sanders County	Floodplain Delineation of the Clark Fork River	100,000		110,670
Sheridan County Conservation District	Sheridan County Groundwater Management Program	99,700		231,750
Sheridan, Town of	Water Supply Improvement	30,000		40,400
Sweetgrass Community/ County Water and Sewer District	Wastewater Treatment Facility Rehabilitation and Upgrade	100,000		631,000
Teton County Conservation District	Irrigation Methods and Pesticide Transport to Groundwater	100,000		160,361
Thompson Falls, City of	Distribution System Improvement	100,000		2,202,085
Tin Cup County Water and Sewer District	Tin Cup Lake Dam Restoration Project	100,000		422,800
Troy, City of	Water System Master Plan	30,000		30,000
West Crane Irrigation District	West Crane Sprinkler Irrigation Project	100,000		1,074,400
Willow Creek Sewer District	Total Retention Lagoon System	100,000		1,031,400
TOTALS		\$5,919,508	\$6,803,167	\$46,924,099

1. The total cost of most projects includes a grant request, some loan requests, and other funds not listed here.

Emergency Grants

In addition to the grants authorized by the legislature, the department has authority to provide \$125,000 in emergency grants to governmental entities if delaying the project until legislative approval can be given would cause loss of property or create legal liability. In FY 1998, DNRC made three emergency grants, all of which were funded by the Renewable Resource Emergency Grant Program.

- In November 1997, a renewable resource emergency grant in the amount of \$30,000 was awarded to the City of Harlem to repair the inlet to the community's water treatment plant.
- In May 1998, an emergency grant to Lake County Land Services (Lake County) in the amount of \$9,936 funded approximately 20 percent of the costs incurred in constructing a flood control siphon near Bigfork. Necessitated by dramatic increases in groundwater elevations, the project successfully drained a developed area in the vicinity of Woods Bay.
- A \$5,000 renewable resource emergency grant to the Cartersville Irrigation District in June 1998 provided 50 percent of the funding needed to reinforce the Cartersville Diversion Dam in the Yellowstone River at Forsyth.

Private Grants

Financial assistance is available to any individual, association, partnership, or corporation (both for-profit and nonprofit). The legislature allocated \$100,000 for private grants. By law, grant funding for a single project may not exceed 25 percent of the total estimated cost.

Most of the funds are targeted to assist small, privately owned water systems. Owners of small systems have difficulty in meeting Safe Drinking Water Act regulations, but must meet the same requirements that municipal water systems face. The department has identified 70 private water systems for potential funding. The average size of a grant is just over \$2,767; the grant must be matched on a three-to-one basis. DNRC awarded six grants totaling \$47,320 in FY 1998.

Private Loans

Loans for private water development projects are available from the department. Loans to individual private entities may not exceed the lesser of \$200,000 or 80 percent of the fair market value of the security given for the project. Private loans to individuals must be secured with real property. Loans up to \$300,000 are now available for organizations with multiple shareholders, such as water user associations and ditch companies. These loans are scored based on the revenue produced by the system. Irrigation system improvements — for example, the conversion from flood irrigation to sprinkler irrigation — are the most common type of project funded through private loans.

To finance loans, the law provided authority to issue general obligation renewable resource bonds up to a total outstanding balance of \$10 million. Approximately \$12.2 million in general obligation bonds have been issued to date, and the current outstanding balance on the loans is \$6.35 million. In FY 1998, 106 loans were being administered, and DNRC closed 10 new loans totaling \$940,317.

Public Loans

This program makes loans to communities for renewable resource projects. The program was started in 1981 by the Montana Legislature, which granted a total of \$250 million in coal tax bonding authority. In FY 1998, 75 public loans with a balance of approximately \$54.5 million were outstanding, including three new loans that were closed for \$1.02 million. The legislature has approved \$24 million in loans for which funds have not yet been drawn. DNRC is estimating that approximately \$5 million in loans will close before the end of the biennium.

Examples of the types of projects completed and financed by the program are water and sewer systems. DNRC has also loaned funds to rehabilitate dams and finance irrigation projects around the state. Current public loans are listed in Table 6. Some entities have received more than one loan.

Table 6
Public Loans

Applicant	Balance Due	Applicant	Balance Due
Anaconda - Deer Lodge County	\$300,215	Lakeside Sewer District #1	\$57,241
Antelope	67,946	Lakeside Sewer District #2	528,115
Beaverhead County/Red Rock Water and Sewer	2,186,797	Lakeside Water District	66,817
Belgrade	456,434	Libby	326,696
Bitterroot Irrigation District	829,381	Lima	174,212
Bozeman #1	286,539	Lockwood Irrigation District	167,284
Bozeman #2	529,980	Miles City	1,198,013
Broadwater Power Project #1	21,735,000	Mill Creek Water and Sewer District	741,016
Broadwater Power Project #2	1,795,000	Neihart	140,663
Charlo Water District	18,745	Park County	95,418
Columbia Falls	990,291	Pondera County Canal and Reservoir #1	417,782
Conrad	134,324	Pondera County Canal and Reservoir #2	309,402
Culbertson #1	328,108	Poplar	275,503
Culbertson #2	51,647	Sage Creek Water District	573,655
Cur Bank - North Glacier Water and Sewer District	65,827	Sanders Water District at Noxon	115,889
Denton	130,586	Shelby	308,082
Dutton #1	124,176	Shields Canal Water Users Association	20,509
Dutton #2	22,216	State Water Projects Bureau, DNRC - East Fork	950,000
East Bench Irrigation District	559,750	Rock Creek Dam	
East Helena	315,916	State Water Projects Bureau, DNRC -	346,588
Ekalaka	126,269	Petrolia Dam	
Ennis #1	93,674	State Water Projects Bureau, DNRC -	113,248
Ennis #2	698,309	Upper Musselshell Water Users Association	
Fairview	208,213	State Water Projects Bureau, DNRC -	17,712
Flathead County for Evergreen	3,220,384	Yellowwater Water Users Association	
Forsyth #1	339,016	Sun Prairie Sewer District	448,732
Forsyth #2	293,848	Sun Prairie Water and Sewer District	172,792
Fort Benton #1	434,151	Three Forks #1	163,628
Fort Benton #2	520,480	Three Forks #2	104,962
Gardiner - Park County Water District	263,991	Tin Cup Water and Sewer District	304,204
Glasgow	2,076,281	West Yellowstone #1	329,385
Glendive	1,404,349	West Yellowstone #2	424,220
Hamilton #1	57,799	White Sulphur Springs	270,851
Hamilton #2	14,216	Whitefish	418,539
Harlem	280,358	Whitehall	48,270
Havre	1,495,882	Wibaux	210,358
Huntley Irrigation District	1,326,531	Winnett	45,465
Hysham	194,153	Yellowstone County #1	185,534
Kevin	104,689	Yellowstone County #2	200,436
Lakeside County Water and Sewer District	196,411	TOTAL	\$54,549,103

State Wastewater Revolving Fund Loans

The State Wastewater Revolving Fund was created by the 1989 legislature. It is designed to combine federal grant money with state matching money to create a low-interest loan program that funds community wastewater treatment projects. DNRC and the Department of Environmental Quality (DEQ) co-administer the program. The U.S. Environmental Protection Agency (EPA) makes a grant of federal funds to the state. The state must match 20 percent of that grant. The state's share is derived from the sale of state general obligation bonds. Loans are made by DNRC to public entities at an interest rate of 4 percent for 20 years.

Since the program started, the State of Montana has issued \$11.0 million in general obligation bonds and EPA has contributed \$36.7 million in grants, which accounts for the \$47.7-million program level. Seven loans were closed in the 1998 construction season. The 1997 legislature authorized this program to finance landfills for small communities effective July 1, 1997, but no landfill loans have been made to date. See Table 7 for a listing of current loans and proposed loans.

Table 7
State Wastewater Revolving Fund Loans

Loans Completed		Loans Completed	
	Amount		Amount
Big Sky #1	\$ 5,513,000	Missoula	
Big Sky #2	417,000	California Street	\$502,000
Bigfork	1,000,000	NW Broadway	943,000
Butte-Silver Bow	5,307,390	Rattlesnake	304,000
Cascade #1	202,000	Reserve Street	2,221,000
Cascade #2	1,218,000	Wapukiyi/Bellevue Add-On	324,000
Cut Bank #1	531,000	Wapukiyi/Bellevue Clarifier #1	2,465,000
Cut Bank #2	800,000	Wapukiyi/Bellevue Clarifier #2	1,177,000
Darby	111,000	Missoula County	
Dillon	1,856,000	Linda Vista #1	241,000
Flathead County		Linda Vista #2	1,943,000
Bigfork	424,000	Park County #1	378,000
Evergreen #1	3,600,000	Park County #2	83,000
Evergreen #2	700,000	Red Lodge	390,000
Fort Benton	1,177,000	Ronan	623,000
Glasgow #1	402,000	Saint Marie (Glasgow)	150,000
Glasgow #2	1,048,000	Shelby	481,000
Glendive #1	236,000	Townsend	1,240,000
Glendive #2	376,000	Troy	1,824,000
Havre	2,224,000	Vaughn-Cascade	298,000
Kalispell	3,913,000	Victor	300,000
		Wolf Point	453,000
		Worden-Ballantine	260,000
		TOTAL	\$47,655,390
Proposed Loans		Amount	
Columbia Falls		\$ 2,677,000	
Dutton		377,000	
Harlowton		1,225,000	
Helena		8,153,000	
Hot Springs		120,000	
Lincoln Lewis and Clark Sewer District		310,000	
Missoula Special Improvement District		2,647,000	
Valer		200,000	
		TOTAL	\$ 15,709,000

Safe Drinking Water Revolving Fund Loans

This fund provides for training, technical assistance, and the issuance of low interest loans to local governmental entities to finance drinking water facilities and implement the Safe Drinking Water Act. State enabling legislation was passed in 1995 and amended in 1997, after the U.S. Congress passed federal enabling legislation in August 1996. DNRC and DEQ will co-administer the safe drinking water program. The two agencies applied for the federal funds in January 1998. Loan funds will be available for communities in July 1998.

Table 8
Proposed Drinking Water Revolving Fund Loans

Proposed Loans	Amount
East Helena #1	\$228,000
East Helena #2	3,234,000
Glendive	864,000
Havre #1	600,000
Havre #2	5,820,000
Lakeside	400,000
Laurel	5,250,000
Twin Bridges	300,000
Whitefish #1	400,000
Whitefish #2	5,839,000
TOTAL	\$22,935,000

Treasure State Endowment Program Loans

The treasure state endowment program is administered by the Montana Department of Commerce. However, if a loan is recommended by the Department of Commerce and authorized by the legislature, DNRC is responsible for closing and administering the loan. This relationship was developed because of the loan expertise and financial management system that DNRC has developed over the last 15 years in administering the renewable resource loan program. The 1997 legislature authorized four treasure state endowment program loans totaling \$1.9 million (see Table 9).

Table 9
Treasure State Endowment Loans

Applicant	Amount
Choteau	\$110,000
Coran	170,000
Fort Peck	1,325,000
Livingston	300,000
TOTAL	\$1,905,000

Conservation District Water Reservations

In 1978, the Board of Natural Resources and Conservation granted water reservations to 14 conservation districts (CDs) in the Yellowstone River basin. Nine CDs were granted reservations in the upper Missouri River basin in 1992, and eleven CDs were given reservations in the lower and little Missouri River basins in 1994. Some CDs have reservations in more than one basin. The Resource Development Bureau provides legal, technical, and programmatic assistance to conservation districts in administering water reservations.

In FY 1998, the Yellowstone CDs received three reserved water use applications. These applications are pending final approval.

To date, twelve reserved water use authorizations have been issued by CDs in the Missouri River basin. Pending final approval are an additional twelve reserved water use applications.

FORESTRY DIVISION

Protecting Montana's natural resources from wildland fires through regulation and partnerships with federal, state, and local agencies, and helping Montanans achieve land stewardship and compliance with state forestry laws.

The Forestry Division, headquartered in Missoula, is responsible for planning and implementing forestry programs through a network of field offices located across the state. The forestry program has two major functions: fire and aviation management, and service forestry. Each function is further broken down into programs and subprograms, most with statewide application. The Forestry Division has the following goals and objectives:

- Protecting the state's natural resources from wildfire, insect pests, and disease
- Sustaining or improving the natural resources of private forest land for the good of all Montanans
- Promoting and supporting conservation practices on all lands in Montana
- Enforcing the state's forest practices laws in a manner that is both fair and consistent to all parties, and that complies with the intent of the legislation
- Encouraging the maintenance, planting, and management of trees and shrubs in Montana communities

Fire and Aviation Management

As charged by state law, DNRC protects the natural resources of the state from fire and is responsible for fire protection on all forest lands within this state that are officially classified by the department as forest lands.

Protection

DNRC's Fire and Aviation Management Bureau is a team of trained professionals providing wildland fire service leadership to Montana, commissioned by Montana citizens to protect the natural resources of the state by preventing and suppressing wildland fires, and accountable to Montana citizens. DNRC protects natural resources on state and private lands through aggressive fire prevention and protection activities. A total of 50,542,404 acres of state-owned and private lands are protected as detailed in state resource management plans, or as required by law (see Table 10). The fire and aviation program staffs 65 engine (and water tender) companies and 5 helicopters to provide direct protection of 5.1 million acres. The program also loans over 350 engines to local fire agencies, primarily in the eastern part of the state. DNRC has been given the responsibility to coordinate all mutual aid responses of fire department resources that cross county lines.

Direct Protection

DNRC provides direct protection to a total of 5,138,392 acres consisting of 3,493,405 acres of state and private land; 694,665 acres of U. S. Bureau of Land Management (BLM) lands; and 950,322 acres of U. S. Forest Service (USFS) lands. Privately owned forested lands within the boundaries of an incorporated city are included. Priority is given to the protection of forested lands owned by the state.

State/County Cooperative Fire Protection

Under the State/County Cooperative Fire Protection program, the department has secondary protection responsibility for 45,309,480 acres of state-owned and privately owned non-forested lands. These lands are predominantly found in eastern Montana. Approximately 254,416 acres of private land in Granite, Mineral, and Missoula Counties were approved for protection under the county cooperative program beginning in FY 1998.

Contracted Federal Protection

Fire protection of a total of 1,739,519 acres of state and private lands are subcontracted to federal agencies.

Table 10
Fire Protection by DNRC in FY 1998

Total Acres	Category	State and Private Lands (Acres)	Public Lands (Acres)
5,138,392	DNRC Direct Protection State and Private Lands BLM Lands USFS Lands	3,493,405	694,665 950,322
1,739,519	Federal Direct Protection ¹ Protected by BIA (Tribal) Protected by BLM Protected by USFS	151,532 85,810 1,502,177	
45,309,480	State/County Cooperative Fire Protection ²	45,309,480	
52,187,391	TOTALS	50,542,404	1,644,987

1. Subcontracted to federal agencies

2. Includes all 56 counties

Fire Prevention

The fire prevention program's purpose is to reduce the number and severity of wildfires occurring each year. The program is made up of three parts:

- Engineering through prescribed fire and application of DNRC's wildland/residential interface development guidelines
- Education
- Compliance measures applied to avert wildfire damage on lands protected by DNRC and cooperating counties

Wildland/residential interface areas are emphasized, and information is provided to local officials so that they can make informed decisions regarding local planning and development issues.

DNRC has completed its fire risk rating on 95 percent of the direct protection areas that are high risk. Several hundred plats of proposed developments are being evaluated, and recommendations are being submitted to county commissions regarding conditions for fire-safe developments. The Fire Protection Guidelines for Wildland/Residential Interface Development continue to be of high interest to many county organizations. The guidelines continue to be applied to existing and proposed developments throughout the state.

Major issues in FY 1998 included implementation of both the new Federal Fire Policy and the new Six-Party Master Fire Agreement with the federal fire agencies. These efforts will continue in FY 1999.

Fire Suppression

Through the fire suppression program, DNRC directly protects 5,138,392 acres of state, private, and federal lands; assists all 56 cooperating counties with fires exceeding their capabilities on 45,309,480 acres of state and private lands; and subcontracts fire protection on 1,739,519 acres of state and private lands to the U.S. Forest Service, U.S. Bureau of Land Management, and U.S. Bureau of Indian Affairs (Tribal). DNRC also provides support and assistance to federal fire agencies and other states when appropriate.

The number of fires that occurred during the calendar year 1997 fire season was well below the five-year average; 204 fire incidents that burned a total of 3,419 acres were reported (see Figures 9 and 10). The average number of fires over the last five years is 367 per year, and the average number of acres burned over each of the last five years is 35,021. The annual acreage burned varied from 3,419 acres in 1997 to over 119,444 acres in 1996.

Figure 9. Number of Fires on State-Protected Land

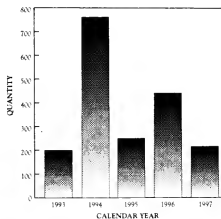
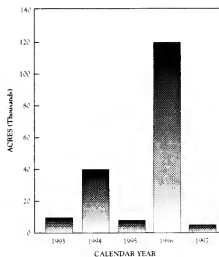
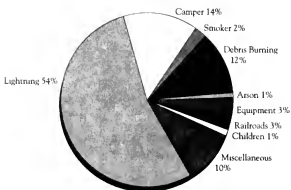


Figure 10. Acres Burned on State-Protected Land



Lightning is the single most frequent cause, starting 54 percent of the fires, with camping as the next most frequent, causing 14 percent (see Figure 11). DNRC contains an average of 94 percent of the fires at under 10 acres.

Figure 11
Percentage of Fires, by Cause
(5-Year Average)



DNRC also provided support to Disaster and Emergency Services on a few nonfire incidents in FY 1998. These incidents involved law enforcement and a threat of flooding from potential dam failure.

Fire Training

The Fire and Aviation Management Bureau provides training in fire prevention, detection, investigation, suppression, aviation, communications, safety, prescribed fire, participation on incident management teams, and wildland fire training instruction.

Wildland fire training is presented annually to approximately 1,500 volunteer and career firefighters in Montana's 56 counties through the County/State Cooperative Fire Protection program. DNRC trains department seasonal firefighters and support personnel for fire protection responsibilities on over 5 million acres of forest lands under direct DNRC protection. DNRC is actively involved in the development of overhead, or management, personnel within the agency and in cooperating wildland fire agencies, in local communities, statewide, and at the regional Northern Rockies Interagency Training Center in Missoula.

During FY 1998, DNRC also assisted Disaster and Emergency Services in providing all-risk or non-wildland fire incident management training.

Development and Support

Through its equipment development program, DNRC obtains federal excess property and uses it to develop fire suppression equipment and vehicles. This equipment is used primarily to support the State/County Cooperative Fire Protection program. In FY 1998, DNRC obtained supplies and vehicles that have a total value of \$2,049,298 through the Federal Excess Property Program. The equipment acquired included a total of 38 vehicles and trailers.

The 14 individual development projects that were completed in FY 1998 are listed in Table 11.

Table 11 Development Projects in FY 1998	
Type 6 (200-gallon) wildland engines	8
Type 3 (800- to 1,000-gallon) engines	3
Shop storage trailer	1
Chassis (painted)	2

Aviation

The aviation program operates and maintains a fleet of eight aircraft (three fixed-wing and five rotary wing). The fixed-wing aircraft, which are located in Kalispell, Missoula, and Helena, are used for fire patrol and personnel transportation. Three medium Huey helicopters are stationed in Kalispell, Missoula, and Helena for fire support and suppression work. Two light helicopters (Bell 206s) are stationed in Helena. One of these is owned by the Department of Environmental Quality (DEQ). DNRC pilots fly this helicopter on DEQ and DNRC missions. The second light helicopter is used for backup or additional coverage.

In FY 1998, the aircraft flew a total of 809 hours. Other program statistics are shown in Table 12.

Table 12
Aviation Program Accomplishments
in FY 1998

Detection	183 hours
Initial attack	113 hours
Support missions	168 hours
Administrative	345 hours
Water delivered	113,771 gallons

Service Forestry Programs

DNRC's service forestry programs provide products and services to various client groups and individuals. The State Nursery grows seedlings for private conservation plantings and reforestation of state-owned lands. Education emphasizing the stewardship and care of forest lands is funded and/or presented to private forest owners and resource professionals. Communities are assisted with the care and planting of their community forests. Montana's forest laws are upheld. Private forest land improvements are administered using federal cost-share funds. Forest health problems are identified and monitored statewide.

Service Forestry Bureau staff also represent Montana on the Western Stewardship Committee, which consists of western state stewardship coordinators and U.S. Forest Service representatives. Montana's coordinator chaired the working group that drafted a new stewardship program funding formula that was adopted, with contingencies, by the Western Council of State Foresters and is under consideration nationally. The working group also offered extensive revision comments on the USFS's Cooperative State and Private Accomplishment Reporting System that were instrumental in the formation of a national task group to modify the system.

Montana Conservation Seedling Nursery

DNRC's nursery produces, sells, and distributes seedlings for conservation plantings such as reforestation, farmstead and field windbreaks, shelterbelts, wildlife habitat, mine land reclamation, living snow fences, stream bank stabilization, and other conservation uses.

In FY 1998 the nursery sold 726,019 plants, as itemized in Table 13. Numbers sold over the last five years are shown in Figure 12. Conservation orders already placed for FY 1999 exceed similar orders in FY 1998 by 200,000.

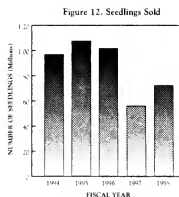


Table 13
Nursery Sales in FY 1998

Conservation seedlings	574,125
Seedlings for reforestation of school trust lands	151,894
TOTAL	726,019

Nursery revenue was \$239,381, which exceeded expenditures by \$3,681. This is the highest revenue ever received for conservation sales and the first time nursery revenues have exceeded expenditures since general fund support was eliminated in 1993.

Forest Pest Management

This program provides pest surveys, training, and technical services to help recognize and manage damaging insects and diseases in Montana's forests. These activities are done in cooperation with the U.S. Forest Service's Northern Region Forest Health Protection Group.

Bark beetle populations continued to decline, although activity increased in some areas. The ongoing outbreak of mountain pine beetles killed lodgepole pine in extreme western Montana and subalpine fir at higher elevations in the southwestern part of the state. Ponderosa pine mortality caused by pine engraver beetles has collapsed to almost undetectable levels.

For the third year in a row, no western spruce budworm defoliation was visible from the air. Douglas-fir tussock moth populations were still very low. No defoliation was detected from either aerial or ground surveys.

Foliage diseases continued at generally high levels affecting western larch, ponderosa pine, and lodgepole pine. Dwarf mistletoe caused approximately 33 million cubic feet of lost growth and mortality, mainly in Douglas-fir, lodgepole pine, and western larch. This year 125 traps were analyzed for gypsy moth activity; no activity was found.

Some of the FY 1998 program accomplishments are listed in Table 14.

Table 14
Forest Pest Management Activities
in FY 1998

Technical assistance to private and industrial land managers	54 assists
Professionals trained in basic pest identification	30
Professionals trained in advanced pest management	30
Loggers and private landowners trained in pest identification and management	55
Pest samples identified and management treatments recommended	21
Aerial survey completed and sketch maps distributed to unit offices	3 million acres
DNRC timber sale analyses written	2

The program, along with USFS, also completed and distributed the annual *Montana Insect and Disease Conditions* report.

A mutual contract is being developed by Montana and Idaho for forest pathology services, funded by a USFS grant.

Forestry Assistance

The forestry assistance program provides a range of services to private forest landowners and economic development organizations. By conveying forestry knowledge, this program helps Montanans perform forestry work that results in good land stewardship, a healthful environment, personal profit, and general economic growth.

In FY 1998, DNRC provided 1,271 forestry assists, including 134 timber sale assists. Federal pass-through funding was used to finance six landowner stewardship workshops that 128 private landowners attended. The landowners wrote 66 stewardship forest management plans covering 9,500 acres. These plans, certified by stewardship advisors, represent thoughtful future management of those lands. An introductory stewardship video was produced with federal stewardship funds by MSU Extension Forestry professionals. The video will attract landowners to the workshops and help them set goals for their forest.

Forty private landowners of a total of 1,295 forested acres participated in the forest stewardship incentive program. The major activities involved thinning 949 acres and planting 86,450 reforestation seedlings on 247 acres. Federal financial cost-share assistance of \$76,805 was approved for these projects. Also, six cost-share stewardship plans were developed covering 5,896 acres.

Besides helping individual landowners, the program assisted two organizations benefiting landowners. Staff served as an ad hoc member of the Board of Directors of the Montana Forest Owners Association (MFOA). Technical and financial assistance helped MFOA develop a new series of landowner workshops. DNRC will help deliver these workshops beginning this fall. DNRC also assisted the Swan Eco-Center by providing signage material for a new ecosystem management interpretive trail near Condon.

Timber Slash

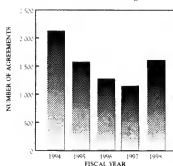
The timber slash program implements state laws pertaining to control of timber slash and debris on private land to minimize wildfire hazards. The department carries out its responsibilities by entering into a bonded contract, called a Hazard Reduction Agreement (HRA), with the private party in charge of each cutting. The program handled 1,596 new HRAs in FY 1998 (see Figure 13), while another 1,556 HRAs were certified and closed. Those numbers are a 27 percent increase in new HRAs and a 20 percent increase in closings, compared to FY 1997 levels.

The timber slash program collected an estimated \$244,000 in administrative fees in FY 1998. In addition, a total of \$73,482 was collected and distributed to Montana State University's Extension Forestry Program.

Forest Practices

The forest practices program provides information and education about forestry best management practices (BMPs) to private persons, corporations, and other agencies. The program also includes standards for all forest practices

Figure 13.
New Hazard Reduction Agreements



conducted in streamside management zones (SMZs). The program helps people comply with voluntary and mandatory measures that protect soil and water resources during timber harvesting operations. In FY 1998, the services listed in Table 15 were provided.

Table 15
Forest Practices Activities
in FY 1998

BMP pre-harvest informational packages mailed to landowners	1,596
On-site consultations	154
Post-harvest evaluations	72
Alternative practices issued	52
SMZ enforcement actions taken	108

In cooperation with the Montana Loggers Association, the program conducted nine BMP field workshops for loggers. BMP water quality audits were planned for the summer of 1998. For the first time, previously audited sites will be re-audited to determine long-term BMP effectiveness.

Community Forestry

The goal of DNRC's community forestry program is to have a viable program in every Montana community. DNRC's community forestry program is funded by a U.S. Forest Service grant established under the 1990 Farm Bill. The program assists community leaders, volunteers, local governments, and the tree care industry with technical assistance, planning, funding for local programs, volunteer coordination, and education.

The program works closely with several major partners:

- U.S. Forest Service
- U.S. Natural Resources Conservation Service
- Montana Association of Nurserymen
- Montana's Resource Conservation and Development Areas
- Montana State University Extension Service
- Montana Community Forestry Council

Staff also participate in the Montana League of Cities and Towns, local tree and park boards, and volunteer organizations.

The Montana community forestry program does not receive any state funding. Through partnerships, cost-shares, donations from special projects, and a \$170,000 federal grant, the program leverages approximately \$680,000 more. When in-kind and volunteer contributions are considered, the Montana program has nearly a million-dollar impact each year.

Major categories of assistance are shown in Table 16.

Table 16 Major Categories of Community Forestry Activities in FY 1998	
Number of communities with active programs	62
Street tree inventories completed/assisted	8/20
Communities receiving technical assistance	110
Technology transfer activities (workshops, presentations, conferences, training sessions)	200

Highlights of the community forestry program for FY 1998 follow.

- Working directly with the Montana Community Forestry Council, the program completely revised the Community Forestry Strategic Direction, a five-year plan that outlines program goals and objectives through 2003. The five-year plan was signed into effect in January 1998.
- The first Montana Tree Climbing Championships were hosted in Missoula in March. Competition and events such as this provide valuable interaction between the tree care industry and the state community forestry program. Our state winner proceeded to earn a second-place finish at the regional competition in Denver, Colorado.
- This year, 22 Montana communities were designated as "Tree City USAs" by the National Arbor Day Foundation. Also, four communities earned growth awards for extra efforts in building their programs.
- Through an innovative cost-share project with the Montana Conservation Corps' Americorps program, street tree inventories were completed for eight communities. The data are being transferred into formats useful for interpretation and analysis.
- The Montana Community Forestry program hosted a regional workshop, "Trees, People, and the Law," which is conducted by the National Arbor Day Foundation. Billings hosted the workshop, which was another first in Montana.

OIL AND GAS CONSERVATION

Prevent waste and provide for the conservation of crude oil and natural gas through regulation of exploration and production.

The quasi-judicial Board of Oil and Gas Conservation (BOGC) and its technical and administrative staff in the Oil and Gas Conservation Division are attached to the Department of Natural Resources and Conservation for administrative purposes. The board consists of seven members appointed to four-year terms by the governor. Current BOGC members are:

David Ballard, Chairman Billings Petroleum Geologist and Geophysicist	
Denzil Young, Vice Chairman Baker Attorney	Stanley Lund Reserve Rancher
George Galuska Billings Petroleum Geologist	Warren H. Ross Chinook Rancher
Allen Kolstad Ledger Farmer	Dean A. Swanson Polson Petroleum Landman

The board's primary responsibilities lie in the conservation of resources and prevention of waste through the regulation of oil and gas exploration and production. In regulating these activities, the board relies heavily on its Oil and Gas Conservation Division staff. The division is headquartered in Billings, with field inspectors in Glendive, Plentywood, Roundup, and Shelby, and an administrative office in Helena. The board accomplishes oil and gas regulation through permits, bonds, rules, and orders. The field inspectors, who conduct on-site visitations and investigations, can issue deficiency reports. The board is empowered to levy both civil and criminal fines.

The board's regulatory actions are aimed toward four primary goals:

- Prevention of waste of oil and gas resources
- Conservation of oil and gas through encouragement of maximum efficient recovery of those resources
- Protection of the correlative rights of the mineral owners, i.e., the right of each owner to recover its fair share of the oil and gas underlying its lands
- Prevention of harm to nearby surface or underground resources from oil and gas operations

It accomplishes these goals by establishing spacing units, issuing drilling permits, administering bonds (required to guarantee the eventual proper plugging of wells and restoration of the surface), classifying wells, and adopting rules. BOGC also repairs orphaned, abandoned, and problem wells. It maintains a library of well cutting samples and core samples in Billings. (The cores, themselves, are stored in the U.S. Geological Survey Depository in Arvada, Colorado.) Since 1993, the board has certified companies to receive tax incentives for horizontal wells and enhanced recovery projects.

The oil and gas program is supported chiefly by the oil and gas conservation tax (0.3 percent of the value of the oil and gas produced and sold, less government royalties).

The Underground Injection Control Program

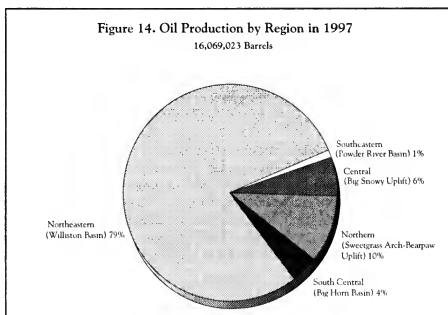
In 1996, the Board of Oil and Gas Conservation received primacy from the U.S. Environmental Protection Agency (EPA) and began operating the Underground Injection Control (UIC) program for Class II injection or disposal wells in Montana. The UIC Program, authorized under Section 1425 of the Safe Drinking Water Act, had previously been administered by EPA, and state administration of the program had been sought for several years.

A Class II injection well is one that (1) injects fluids that have been brought to the surface during oil and gas production, (2) is used to inject fluids for the enhanced recovery of oil or gas, or (3) is used to inject fluids for storage of liquid hydrocarbons.

The objective of the UIC program is to protect underground sources of drinking water. To accomplish this, the board may (1) issue, suspend, revoke, modify, or deny permits; (2) regulate the volume and characteristics of the fluids to be injected; (3) impose operational requirements for a well; (4) investigate conditions, access records, inspect equipment and methods, and sample fluids used by operators; and (5) adopt standards for the design, construction, testing, and operation of Class II injection wells.

Operators apply through the public notice and hearing process by notifying the Billings or Helena Oil and Gas Conservation Office. Operators must file specific information about the company and its officers and meet other application requirements.

The board's jurisdiction applies to all but Indian lands. The costs of the program are being covered by a charge of \$200 per injection well per year and an EPA operating grant of approximately \$110,000 per year.



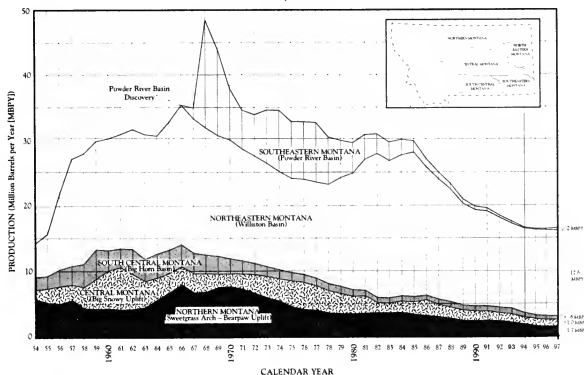
Activity Review

Montana's oil production was 16.1 million barrels in 1997, a slight decrease from the previous year. Oil production is shown by region in Figure 14, while Table 17 presents information about oil production over the last five years. Crude oil production since 1954 is illustrated in Figure 15.

Table 17
Five-Year Summary of Oil Production in Montana

OIL PRODUCTION IN BARRELS	1993	1994	1995	1996	1997
Northern Montana	2,143,943	2,003,272	1,783,331	1,735,895	1,677,301
South Central	772,668	733,965	698,537	653,723	606,858
Central	1,095,551	955,703	1,040,127	950,865	967,478
Williston Basin	13,110,882	12,747,075	12,877,305	12,695,462	12,637,980
Powder River Basin	272,517	90,965	126,524	115,662	179,406
TOTAL	17,395,561	16,530,980	16,525,824	16,151,607	16,069,023
NUMBER OF PRODUCING OIL WELLS					
Northern Montana	2,408	2,324	2,093	2,029	1,971
South Central	122	136	132	130	130
Central	298	272	249	239	231
Williston Basin	1,287	1,311	1,310	1,294	1,301
Powder River Basin	56	71	28	46	73
TOTAL	4,171	4,114	3,812	3,738	3,706

Figure 15
Crude Oil Production in Montana
1954-1997

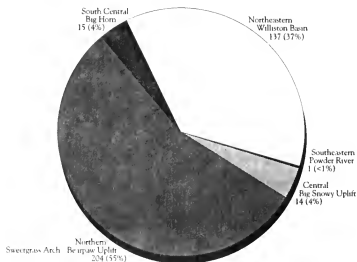


Gas production increased from 51.6 million MCF in 1996 to 53.5 million MCF in 1997. Table 18 summarizes production, imports, and exports of both oil and gas in 1997.

Table 18
Summary of 1997 Oil and Gas Activities

OIL	
	Barrels
Oil Produced	16,069,023
Oil Imported From:	
Canada	39,295,769
Wyoming	<u>17,840,484</u>
TOTAL	<u>57,136,253</u>
Oil Exported	13,800,000
GAS	
	MCF
Gas Withdrawals:	
Natural	46,501,604
Associated	<u>6,987,557</u>
TOTAL	<u>53,489,161</u>
Gas Imported From:	
Canada	12,590,363
North Dakota	9,284,949
Wyoming	<u>9,768,876</u>
TOTAL	<u>31,644,188</u>
Gas Exported To:	
North Dakota	27,287,463
South Dakota	1,260,103
Midwest	<u>17,877,835</u>
TOTAL	<u>46,425,401</u>

Figure 16
Wells Completed in 1997 by Region
(371 Wells)



Well drilling increased from 209 wells drilled in 1996 to 371 in 1997. Figure 16 shows the wells completed by region, while Table 19 presents the well information by county. There were 201 new gas wells and 90 new oil wells completed during 1997. Table 20 details well-drilling activity from 1993 through 1997.

Table 19
Summary of 1997 Well Drilling by County

COUNTY	DEVELOPMENT			EXPLORATORY			SERVICE WELLS	TEMP. ABAND.	TOTAL WELLS
	OIL	GAS	DRY	OIL	GAS	DRY			
Big Horn	0	9	2	0	0	0	0	0	11
Blaine	0	15	3	0	3	7	0	0	28
Carbon	0	0	1	0	0	2	0	0	3
Carter	0	0	0	0	1	0	0	0	1
Chouteau	0	0	0	0	0	2	0	0	2
Daniels	1	0	0	1	0	0	0	0	2
Dawson	3	0	0	0	0	2	1	1	7
Fallon	23	24	0	1	1	0	0	0	49
Glacier	7	0	0	0	0	0	0	0	7
Hill	0	19	8	0	2	2	0	0	31
Liberty	0	1	0	0	0	0	0	0	1
McCone	0	0	1	0	0	1	1	0	3
Musselshell	0	0	3	1	0	2	1	0	7
Phillips	0	119	0	0	0	0	0	0	119
Richland	5	0	5	17	0	6	1	0	34
Roosevelt	5	0	1	2	0	4	0	1	13
Rosebud	0	0	0	2	0	5	0	0	7
Sheridan	11	0	4	6	0	1	0	0	22
Stillwater	0	0	0	1	0	0	0	0	1
Toole	2	7	5	0	0	1	0	0	15
Valley	1	0	0	0	0	2	0	0	3
Wibaux	1	0	0	0	0	4	0	0	5
TOTAL	<u>59</u>	<u>194</u>	<u>33</u>	<u>31</u>	<u>7</u>	<u>41</u>	<u>4</u>	<u>2</u>	<u>371</u>

Table 20
Five-Year Summary of Wells Drilled

	1993	1994	1995	1996	1997
DEVELOPMENT WELLS DRILLED					
Oil Wells	39	34	53	68	59
Gas Wells	80	78	65	54	194
Dry Holes	18	29	14	15	33
Service Wells	1	5	10	4	4
TOTAL	<u>138</u>	<u>146</u>	<u>142</u>	<u>141</u>	<u>290</u>
EXPLORATORY WELLS DRILLED					
Oil Wells	9	23	7	13	31
Gas Wells	3	12	15	10	7
Dry Holes	29	45	44	40	41
Temporary Abandoned	3	6	3	5	2
TOTAL	<u>44</u>	<u>86</u>	<u>69</u>	<u>68</u>	<u>81</u>
TOTAL WELLS DRILLED	<u>182</u>	<u>232</u>	<u>211</u>	<u>209</u>	<u>371</u>

Geophysical activities increased 27 percent over the level in 1996. Nine contractors completed 38 seismic projects in 1997. The Williston Basin in northeastern Montana received most of the seismic activity. A significant number of the permitted projects involved 3-D techniques.

The number of horizontal wells permitted in 1997 increased dramatically, with 91 new horizontal wells (up from 28 in 1996) and 20 horizontal recompletions of existing vertical wells (up from 7 in 1996). The Board of Oil and Gas Conservation approved one new enhanced recovery project and the expansion of another, thereby qualifying the incremental increase in production for a lower tax rate. Five horizontal recompletion efforts were certified for tax purposes.

The board's staff issued 484 permits to drill during the year, which is an 86 percent increase over the number issued in 1996. An environmental assessment was performed for each application involving private or state-owned lands prior to permit issuance.

BOGC issued 147 orders during the year, which is a 79 percent increase over the number issued in 1996. Most of these orders authorized increased well density to accommodate in-fill drilling programs, established permanent spacing for horizontal wells and exception wells, delineated new fields, and allowed exceptions to existing field rules.

Using funds from the oil and gas production damage mitigation account and DNRC's reclamation and development grants program, BOGC plugs and/or restores "orphaned" wells (those for which either no responsible party can be found, or the responsible party is financially unable to carry out its duties). The board, which has statutory authority to spend \$200,000 each biennium from the damage mitigation account for this purpose, spent \$13,111 from that appropriation in 1997. The board currently has seven grant awards amounting to \$2.06 million from the reclamation and development grants program and has spent \$911,000 to date on well plugging and restoration projects. Requests for proposals and/or contracts are being developed for the remainder of the grant funds, and the division will request two additional \$300,000 grants from the 1999 legislature.

A World Wide Web page with weekly activity reports, staff directory, rules and regulations, and other information about board programs was implemented in 1997. The address of the page is:

<http://www.dnrc.state.mt.us/oilgas/>

RESERVED WATER RIGHTS COMPACT COMMISSION

Working to "conclude compacts for the equitable division and apportionment of waters between the State and its people and the several Indian Tribes claiming reserved water rights within the state" (MCA 85-2-701) and "between the State and its people and the federal government claiming non-Indian reserved waters within the state" (MCA 85-2-703).

The Montana Legislature created the Reserved Water Rights Compact Commission (RWRCC) in 1979, the same year that it created the Montana Water Court. The purpose of the commission is to negotiate, on behalf of the State of Montana, with Indian Tribes and federal agencies claiming federal reserved water rights in the state. While they are being negotiated, the claims of the Tribes and federal agencies are suspended from adjudication in the Water Court. After being submitted for public comment in the specific area impacted, a negotiated settlement must be ratified by the Montana Legislature and the Tribal Council (in the case of Indian reserved rights) and approved by the appropriate federal authorities.

Montana was one of the first states to conduct such negotiations, and it is still the only state to do so using a commission. The RWRCC is supported by an 11-member staff.

The Compact Commission

The Reserved Water Rights Compact Commission is made up of nine members who serve for four-year terms. One member is appointed by the Attorney General's Office, four by the Governor's Office, two by the Speaker of the House, and two by the President of the Senate. Current RWRCC members are:

Chris Tweeten, Chairman
Helena
Deputy Attorney General

Bob Thoft, Vice Chairman
Stevensville
Rancher

Rep. Antoinette "Toni" Hagener
Havre
Retired Teacher

Tara DePuy
Livingston
Park County Attorney

Rep. John "Sam" Rose
Choteau
Rancher/Retired Teacher

Gene Etchart
Glasgow
Rancher

Sen. Chuck Swysgood
Dillon
Trucking

Jack Salmond
Choteau
Rancher/Outfitter

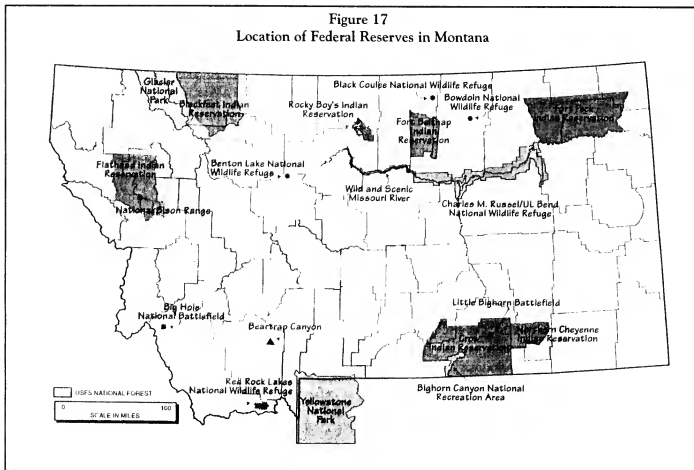
Sen. Bea McCarthy
Anaconda
Teacher

Federal Reserved Water Rights

A federal reserved water right is a right to water that was created when Congress or the President of the United States reserved land out of the public domain. Federal reserves in Montana are shown in Figure 17. It was intended that enough water be reserved to meet the purposes for which the reserved lands were designated.

The date that the land was withdrawn and the reservation created is the priority date of a federal reserved water right. Reserved water rights for Indian reservations, for instance, go back to the 1800s. Federal reserved water rights do not have the same restrictions placed on them as on state appropriative rights. For example, a notice of appropriation or a beneficial use is not required to maintain a federal reserved right, and it is not lost due to non-use.

Figure 17
Location of Federal Reserves in Montana



Completed Compacts

The commission has completed the seven compacts listed in Table 21.

Table 21 Compacts Concluded by the Reserved Water Rights Compact Commission		
Compact	Date	Comments
Fort Peck - Assiniboine and Sioux Tribes MCA 85-20-201	May 1985	This compact contains a provision for water marketing by the Tribes, making federal legislation necessary. That federal legislation has not yet passed. This compact is currently under consideration by the Water Court.
Northern Cheyenne Tribe MCA 85-20-301	September 1992	Included in the compact is a requirement that the federal government and the State of Montana contribute funds to repair and enlarge the unsafe Tongue River Dam. Planning and oversight of dam construction are being handled by the DNRC Water Resources Division. This compact has been approved by the Water Court.
U.S. National Park Service Yellowstone National Park Glacier National Park Big Hole National Battlefield MCA 85-20-401	January 1994	This compact includes an article providing a controlled groundwater area to protect the hydrothermal system in Yellowstone National Park. It is now in the Water Court approval process.
U.S. National Park Service Little Bighorn Battlefield National Monument Bighorn Canyon National Recreation Area MCA 85-20-401	May 1995	Codified with the first compact with the National Park Service (above), this compact has been filed with the Water Court.
U.S. Bureau of Land Management (BLM) Wild and Scenic Missouri River Beartrap Canyon, Madison River MCA 85-20-501	March 1997	This compact settles the instream flow rights for two river segments. It has received final approval from BLM management and the U.S. Department of Justice. It will be submitted to the Montana Water Court.
U.S. Fish and Wildlife Service (FWS) Benton Lake National Wildlife Refuge Black Coulee National Wildlife Refuge MCA 85-20-701	March 1997	This compact settles the reserved water rights for two of the six national wildlife refuges. It has been approved by FWS and the U.S. Department of Justice. The compact will be submitted to the Montana Water Court.
Chippewa Cree Tribe of the Rocky Boy's Indian MCA 85-20-601	April 1997	This compact allocates 10,000 acre-feet per year (AFY) to the Tribe from water arising on the reservation and includes an agreement to seek 10,000 AFY from water stored in Tiber Reservoir. The compact also includes an agreement to seek federal authorization for a drinking water system for Rocky Boy's Reservation. The compact was approved by the Chippewa Cree Tribal Council, passed by the legislature, and signed by the governor. The Tribe, the U.S. Departments of Justice and the Interior, and the State of Montana submitted the compact to Congress early in 1998. The parties are attending congressional hearings in Washington, D.C.

Current Negotiations

Commission members and staff have been concentrating on negotiations concerning three Indian reservations and two federal agencies.

Indian

Assiniboine and Gros Ventre Tribes of the Fort Belknap Reservation

In 1995 the commission, the Fort Belknap Reservation Tribes, and federal team members agreed to delay formal negotiations, but to proceed with joint technical work necessary to develop practical solutions to the water supply problems in the area. The commission presented its review of Tribal water claims to the Tribal Council at a May 1997 meeting. The parties met in May 1998 and have been continuing their joint technical work. Commission staff will continue their evaluation of irrigation in the Milk River basin. The Tribe and the commission will meet again in September 1998.

Blackfeet Tribe of the Blackfeet Reservation

In the early 1990s, the Blackfeet Tribe chose to litigate rather than negotiate. In November 1997, the Tribal chair informed the commission that the Tribe proposed to resume negotiations and presented a proposal for settlement. A six-month stay of litigation was requested and was entered by the Water Court in December. In January 1998, one initial negotiating session was held in Great Falls to discuss whether negotiations should resume and, if so, how the parties should proceed. In February, the commission accepted the Tribe's request to resume negotiations. Staff meetings have been held to exchange technical information that will allow the State of Montana and the United States to evaluate the Tribe's proposal. The parties are seeking a six-month extension of the Water Court's original stay of the litigation.

Crow Tribe of the Crow Reservation

The commission has had several negotiating sessions with the Crow Tribe. Ongoing technical work includes, among other things:

- Developing a hydrologic model of the river systems on the reservation
- Completing work on a comprehensive land ownership map
- Examining, by the DNRC Water Resources Regional Office in Billings, of state-based water claims
- Finalizing land arability and soils classifications

Legal issues involving land status are being researched, and data on irrigated lands in Big Horn County have been put into digital format.

Federal

U.S. Department of the Interior, Fish and Wildlife Service

National Wildlife Refuges

The U.S. Fish and Wildlife Service (FWS) claimed federal reserved water rights for six national wildlife refuges in Montana. A compact for Benton Lake National

Wildlife Refuge and Black Coulee National Wildlife Refuge passed the 1997 legislature and was signed by the governor. It was approved in July 1997 and is in the process of being filed with the Water Court.

Work is continuing on the four remaining FWS units:

- Bowdoin National Wildlife Refuge
- Charles M. Russell/UL Bend National Wildlife Refuge
- Red Rock Lakes National Wildlife Refuge
- The National Bison Range

Negotiations with FWS on these units opened in spring of 1995, and sessions were held during the early part of FY 1996. Joint technical work has proceeded on Red Rock Lakes, and public comment has been solicited on a proposal for settlement. The commission hopes to take a settlement agreement to the 1999 Montana Legislature.

U.S. Department of Agriculture, Forest Service

National Forests

Negotiators have reached tentative agreement on issues under Phase II of the 1992 Memorandum of Understanding between the commission and the U.S. Forest Service (USFS). The negotiating parties have identified the following test watersheds in Montana national forests:

- | | |
|------------------------------|---------------------|
| • Bear Creek | • Holland Lake |
| • Birch Creek | • Hyalite Creek |
| • Blodgett Creek | • Rattlesnake Creek |
| • Crow Creek | • Rock Creek |
| • East Fork Bitterroot River | • Skalkaho Creek |
| | • Willow Creek |

Alternative quantification methodologies and hydrologic models will be used to test and analyze natural flows in these basins. Potential future water requirements also will be identified, and public information meetings will be held. Commission staff continue to track activities in Idaho, Wyoming, and Colorado regarding USFS federal reserved water rights.

Agricultural and Sheep Experiment Stations

Negotiators have not begun to discuss the reserved rights of the Agricultural and Sheep Experiment Stations at this point.

Preliminary Discussions

Beginning in 1995, the commission has had some preliminary discussions with the Confederated Salish and Kootenai Tribes of the Flathead Reservation regarding future negotiations. Currently, the parties are working to finalize a Memorandum of Understanding governing negotiating procedures.

Other Reserved Rights

The Turtle Mountain Band of Chippewa owns numerous small allotments scattered throughout Montana. At this time, no negotiations or technical work have been started with the Turtle Mountain Band of Chippewa for settlement of its federal reserved water rights in Montana.

TRUST LAND MANAGEMENT DIVISION

Manage the State of Montana's trust land resources to produce revenues for the trust beneficiaries while considering environmental factors and protecting the future income-generating capacity of the land.

Overview

History

By the Enabling Act approved February 22, 1889, the Congress of the United States granted to the State of Montana, for common school support, sections sixteen and thirty-six in every township within the state. Some of these sections had been homesteaded, some were within the boundaries of Indian reservations, and yet others had been otherwise disposed of before passage of the Enabling Act. To make up for this loss, and in lieu thereof, other lands were selected by the State of Montana.

The Enabling Act and subsequent acts also granted acreage for other educational and state institutions, in addition to the common schools. The original common school grant was for 5,188,000 acres. The additional acreage provided for other endowed institutions included 668,720 acres, for a total of 5,856,720 acres. The total acreage figure (see Figure 18) fluctuates through the years due to land sales and acquisitions. Mineral acreage now exceeds surface acreage because the mineral estate has been retained when lands are sold. Surface acreage at the end of FY 1998 totals over 5.1 million acres; mineral acreage exceeds 6.3 million acres.

The Permanent Fund

The Enabling Act provided that proceeds from the sale and permanent disposition of any of the trust lands, or part thereof, shall constitute permanent funds for the support and maintenance of the public schools and the various state institutions for which the lands had been granted. The Montana Constitution provides that these permanent funds shall forever remain inviolate, guaranteed by the State of Montana against loss or diversion. These funds are often referred to as "nondistributable." The permanent trust balance is shown in Figure 19; Table 22 shows nondistributable receipts for trust revenue for FY 1998 and the current balance of each permanent trust fund.

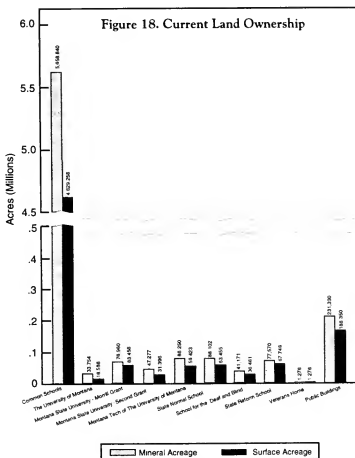
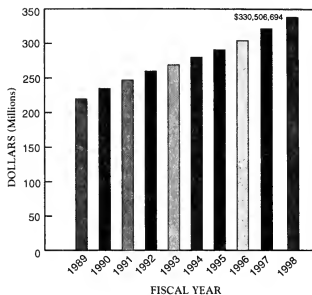


Figure 19. Permanent Fund Balance



Interest and Income

The Enabling Act further provided that rentals received on leased lands, interest earned on the permanent funds arising from these lands, interest earned on deferred payments on lands sold, and all other actual income shall be available for the maintenance and support of such schools and institutions. These funds are referred to as "distributable"; receipts for FY 1998 trust revenue are detailed in Table 22.

Table 22
Revenue Generated for the Trusts
and Permanent Fund Balances in Fiscal Year 1998

Trust	Distributable Revenue	Permanent Fund (Nondistributable Revenue)	
	1998 Revenue	1998 Revenue	Current Balance
Common Schools	\$41,038,831	\$8,040,004	\$309,236,306
Other Trusts			
The University of Montana	200,129	1,639	1,432,492
Montana State University - Morrill Grant	295,883	216,932	2,523,434
Montana State University - Second Grant	625,180	152,914	5,396,181
Montana Tech of The University of Montana	551,491	322,384	3,096,155
State Normal School	472,073	851,958	4,994,499
School for the Deaf and Blind	225,615	10,456	1,868,949
State Reform School (Pine Hills)	273,280	59,389	1,941,756
Veterans Home	6,730	8,524	16,922
Public Buildings	916,092	NA	NA

Distribution of Revenues

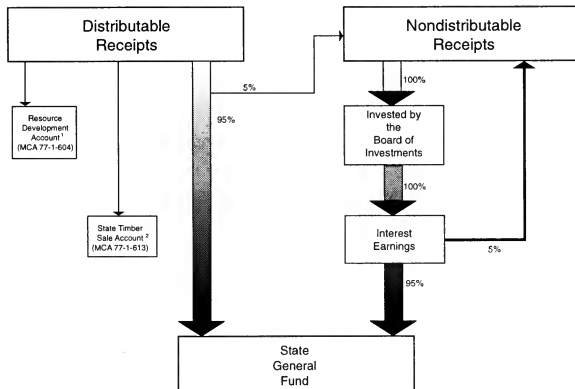
Each section of state trust land is assigned to a specific trust. Distribution of revenues is handled in three different ways, as explained in the following subsections, depending on the section of trust land that generated the revenue.

The Trust Land Management Division also administers land for some other state agencies, in addition to state trust land. Revenue generated from that land is transferred directly to the state agency.

Common School Trust

The distribution of revenues generated from common school trust land is illustrated in Figure 20. From the distributable receipts, a small percentage is used to fund the Resource Development Account and the State Timber Sale Account. Ninety-five percent of the remaining distributable revenues is distributed yearly to the state general fund for use by the public schools of the state. The other 5 percent, together with nondistributable revenues, comprise the permanent fund. The interest earned on the permanent fund is also distributed to the general fund for use by the public schools, with the exception of 5 percent, which is returned to the permanent fund for reinvestment.

Figure 20. Distribution of Revenues for the Common School Trust



1. The Resource Development Account is limited to a small percentage of distributable receipts excluding timber sale income. The purpose of the account is to invest in improving and developing state trust lands in order to increase the income-producing capacity of the lands.

2. The State Timber Sale Account, comprised of timber sales revenue, contains that amount appropriated by the legislature each year to be used specifically for timber sale preparation and documentation. The amount appropriated in FY 1998 was \$1,224,122.

Trusts Other Than the Common School Trust

Distribution of revenues to the other trusts is similar. A small percentage goes to the Resource Development Account, but no funds go to the State Timber Sale Account. All of the remaining distributable receipts go directly to the trust recipient. Included in "other" trusts are:

- The University of Montana
- Montana State University - Morrill Grant
- Montana State University - Second Grant
- Montana Tech of The University of Montana
- State Normal School (Montana State University-Billings and Western Montana College of The University of Montana)
- School for the Deaf and Blind
- State Reform School (Pine Hills)
- Veterans Home

Public Buildings

Revenue received on public buildings trust land is all distributed to the Department of Administration. There is no permanent fund for the public buildings trust.

Purpose

The purpose of the Trust Land Management Division is to administer and manage the state trust timber, surface, and mineral resources for the benefit of the common schools and the other endowed institutions in Montana, under the direction of the State Board of Land Commissioners. The board, which is often called the "State Land Board," consists of Montana's top elected officials:

- | |
|---|
| <ul style="list-style-type: none"> • Marc Racicot, Governor • Nancy Keenan, Superintendent of Public Instruction • Mike Cooney, Secretary of State • Joe Mazurek, Attorney General • Mark O'Keefe, State Auditor |
|---|

The division is divided into four bureaus: agriculture and grazing management, forest management, minerals management, and special use management.

The department's obligation is to obtain the greatest benefit for the school trusts. The greatest monetary return must be weighed against the long-term productivity of the land to ensure continued future returns to the trusts. Total revenues generated by the Trust Land Management Division over the last four years are listed by activity in Table 23. This table contains not only trust revenues, but also those revenues collected for other state entities, revenues appropriated to fund a portion of the division's programs, and other miscellaneous revenues collected by the division.

The Trust Land Management Division distributed over \$44 million in earnings and interest directly to the public schools and other entities in FY 1998. In the public school system, this equated to over \$270 per student. In addition, the program invested over \$9 million into permanent funds in FY 1998, increasing the balance to \$330,506,694.

Table 23
Four-Year Summary of
Revenue Generated (by Activity)

Activity	FY 1995	FY 1996	FY 1997	FY 1998
Agriculture and Grazing Management				
Grazing leases	\$4,726,597	\$4,385,636	\$3,747,968	\$4,113,142
Agricultural leases	8,108,128	10,087,192	10,046,553	9,318,295
	<u>\$12,834,725</u>	<u>\$14,472,828</u>	<u>\$13,794,521</u>	<u>\$13,431,437</u>
Forest Management				
Timber sales	\$4,658,002	\$4,301,854	\$5,761,809	\$6,259,332
Minerals Management				
Oil and gas revenues				
Rentals/bonuses/penalties	\$2,131,337	\$4,221,441	\$1,971,545	\$2,400,550
Royalties	2,887,004	2,849,622	3,618,924	2,810,151
Seismic exploration	16,480	25,655	41,705	29,378
Aggregate minerals				
Rentals	50	100	100	100
Royalties	178,985	118,458	217,660	208,845
Coal				
Rentals/bonuses	50,189	68,247	38,899	46,290
Royalties	3,462,707	3,529,980	6,255,318	2,759,073
Other minerals				
Rentals/penalties	65,224	68,081	86,804	73,081
Royalties	147,717	41,217	24,277	23,006
	<u>\$8,939,693</u>	<u>\$10,922,801</u>	<u>\$12,255,232</u>	<u>\$8,350,474</u>
Special Use Management				
Rights-of-way	\$253,458	\$269,642	\$1,484,511	\$141,989
Cabin and homesite leases	382,287	426,560	482,584	553,095
Land sales	0	0	323,135	18,844
Other leases and licenses	193,216	250,691	321,366	293,331
Recreational use				
General licenses	166,735	216,505	306,755	340,107
Special licenses	67,247	57,118	109,376	65,621
Commercial	112,184	123,410	115,988	125,030
	<u>\$1,175,127</u>	<u>\$1,343,926</u>	<u>\$3,143,715</u>	<u>\$1,538,017</u>
Other				
Trust and legacy interest	\$21,756,639	\$29,952,079	\$23,608,293	\$25,820,410
Other revenues	2,280,187	1,871,234	2,113,233	\$867,351
	<u>\$24,036,826</u>	<u>\$31,823,313</u>	<u>\$25,721,526</u>	<u>\$26,687,761</u>
TOTAL	\$51,644,373	\$62,864,722	\$60,676,803	\$56,267,021

NOTE: The differences between this summary and previous years' summaries result from a change in accounting methods. DNRC believes that this summary best represents revenues generated by the Trust Land Management Division.

Agriculture and Grazing Management

The Agriculture and Grazing Management Bureau supervises the management and leasing of approximately 10,000 agreements for crop and rangeland uses on 4.9 million acres of school trust lands throughout the state. These duties are accomplished by administrative staff and specialists located in the department's Helena office and by staff located in field offices statewide.

Surface Leasing

The surface leasing program is responsible for the administrative functions associated with maintaining surface lease agreements. Each year, responsibilities include processing approximately 1,000 lease renewals; advertising, competitively bidding, and issuing approximately 50 new leases; reviewing and processing assignments, subleases, pasturing agreements, custom farming agreements, pledges, and mortgages; and collecting, verifying, and posting rentals and fees.

Agricultural Lands

Currently 3,000 agreements include agricultural use of state trust lands. Crops raised on these lands are primarily dryland hay and small grains, but also include irrigated grain crops, corn, sugar beets, potatoes, canola, safflower, alfalfa seed, and native grass seed.

In FY 1998, revenues totaling \$9,318,295 were received from agricultural leasing (see Figure 21). The majority of the leases are on a crop-share basis with the minimum share of 25 percent set by statute. In addition to receiving rental payments from lessees, the state participates in and receives farm program payments from the U. S. Department of Agriculture (USDA) Farm Service Agency, as authorized under the Agricultural Market Transition Act of 1996, which included \$2,500,000 for production flexibility contracts and for lands enrolled in the Conservation Reserve Program (CRP).

Figure 21. Agricultural Rentals

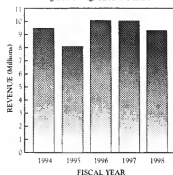
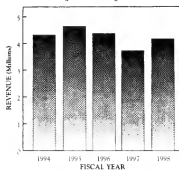


Figure 22. Grazing Rentals



Grazing Lands

Approximately 8,500 agreements include grazing use of trust lands. The 4.3 million acres of classified grazing and forest lands have an estimated carrying capacity of 1,070,000 animal unit months (AUMs). The minimum rental rate for grazing leases is set by a formula which includes the average weighted price for beef cattle sold in Montana during the previous year. In FY 1998, grazing leases generated \$4,113,142 (see Figure 22).

Land Management

The land management program manages the agriculture and grazing resources on the lands administered by the bureau. This responsibility includes compliance with the Montana Environmental Policy Act (MEPA); administration of archeological, paleontological, and historical properties on state trust land; investigations of lease noncompliance; participation in the Federal Farm Program; and oversight of water developments, water rights, and improvement projects such as range renovations and resource development.

In FY 1998, bureau and field staff were heavily involved in the CRP program. This past year, approximately 75 percent of the CRP contracts for the 140,000 state acres

enrolled in the program expired. Most of these acres along with many new ones were offered for enrollment into a new 10-year term in the program. The state receives 50 percent of the annual payment for the lands that are accepted.

Also in FY 1998, weed control efforts continued on state lands. Staff in the Northeastern Land Office have taken the lead in promoting bio-control of the noxious weed, leafy spurge. This spring, nearly 250,000 leafy spurge flea beetles were collected from established insectaries on state lands and re-released on over 160 leafy spurge sites in 12 counties. As new insectaries become established, more flea beetles will be collected for distribution statewide.

Forest Management

The Forest Management Bureau oversees forested, state-owned trust lands to provide income to the various school trusts. Income is derived from the sale of forest products.

The bureau also provides program direction and support to the field foresters, who have primary responsibility for on-the-ground land management activities. That support is provided in several subprograms or areas of expertise: forest land management, planning, hydrology, soils, economics, wildlife, and fisheries. Support and program direction are offered in several different ways: the development of resource management standards, site-specific review and recommendations for proposed management activities, and participation as members of interdisciplinary teams that develop land management proposals.

The State Forest Land Management Plan (SFLMP), approved by the State Land Board in June 1996, guides the management of the forested trust lands. This guidance is provided in the form of general management philosophy and specific resource management standards. The strategic guidance provided by SFLMP is summarized in this excerpt:

Our premise is that the best way to produce long-term income for the trust is to manage intensively for healthy and biologically diverse forests. Our understanding is that a diverse forest is a stable forest that will produce the most reliable and highest long-term revenue stream. Healthy and biologically diverse forests would provide for sustained income from both timber and a variety of other uses. They would also help maintain stable trust income in the face of uncertainty regarding future resource values. In the foreseeable future timber management will continue to be our primary source of revenue and primary tool for achieving biodiversity objectives.

Forest Improvement

The forest improvement program uses fees from harvested timber to improve the health and productivity of trust forests. Uses of these fees authorized by statute include disposal of logging slash, reforestation, acquiring access and maintaining roads necessary for timber harvest, other treatments necessary to improve the condition and income potential of state forests, and compliance with other legal requirements associated with timber harvest. Specific activities include piling of logging slash, prescribed burning, site preparation, seed collection, seedling production, tree planting, thinning, genetic tree improvement, erosion control, and culvert replacement.

In FY 1998, the activities listed in Table 24 were undertaken to improve the health and productivity of forested state trust lands.

Table 24
Forest Improvement Activities in FY 1998

Tree planting	662 acres
Tree netting	88 acres
Net maintenance	2,085 acres
Precommercial thinning—contract	1,554 acres
Precommercial thinning—crews	482 acres
Snow plowing	8 hours
Fireline construction	11,220 feet
Precommercial thinning setup	1,432 acres
Regeneration surveys	276 acres
Grass seeding	18 miles
Pile burning	911 acres
Brush piling	
Dozer	177 acres
Excavator	457 acres
Slashing nonmerchantable	145 acres
Broadcast burning	72 acres
Herbicide application	49 acres
Improved seed collection	300 lbs.
Tree improvement areas managed	30 acres

Forest Product Sales

The forest product sales program incorporates all activities and expenditures required to grow, harvest, and sell forest products from state trust lands efficiently. Activities within this program include field layout of timber sales; development of sale prescriptions; MEPA documentation; preparation of sale contracts, prospectuses, and notices; both field and office administration of timber sales; and sale billing and accounting. These responsibilities are shared among field foresters, area staff, and bureau staff.

As required by MCA 77-5-221 to -223, the department hired a contractor to estimate the annual sustainable yield from all forested trust lands. The bureau provided substantial support to the contractor in compiling the best available inventory data, which was the foundation for the sustainable yield study. In a December 1996 report, the contractor estimated the annual sustainable harvest at 42.164 million board feet. That figure has become the department's annual sales target, until the sustained yield study is reviewed. Review is required at least once every 10 years.

Actual sales in FY 1998 were 41.260 million board feet (see Figure 23). The slight shortfall resulted from a sale that was offered in late June 1998 and received no bids.

During the year, \$6,259,332 in revenue was generated from the harvest of timber (see Figure 24).

Figure 23. Timber Volume Sold

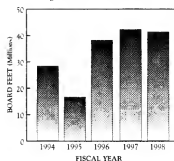
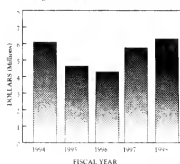


Figure 24. Timber Revenue Received



Also in FY 1998, 21 timber sales including timber permits were prepared totaling 34.3 million board feet (see Figure 25). All timber sales are developed, analyzed, and reviewed in the field by foresters and resource specialists to ensure those sales comply with all applicable laws, policies, and management direction.

In 1998, the Forest Management Bureau and field offices also spent considerable time developing strategies and analytical techniques for implementing the State Forest Land Management Plan. The development of implementation guidance and monitoring procedures, as well as the training of personnel, are ongoing processes.

Inventory

The inventory program is responsible for the collection and analysis of forest resource inventory data in Montana. The program provides a current, comprehensive inventory of the timber resources on 617,000 acres of forested land administered by the Department of Natural Resources and Conservation. Stand-level inventory maps have been drawn and resource data collected for 451,800 acres of state trust land. The development and maintenance of a geographic information system (GIS) used to support planning for forest management activities and environmental analyses is another responsibility of this program.

In FY 1998, the inventory program added 33,300 acres to the stand-level inventory and updated the existing stand inventory maps and data for 9,500 acres. The GIS provided analysis and maps for 25 forest land management projects and updated existing maps and associated databases. In addition, contracts were awarded to compile digitized data on cartographic features and ownership.

Minerals Management

The Minerals Management Bureau is responsible for leasing, permitting, and managing approximately 3,022 oil and gas, metalliferous and non-metalliferous, coal, and sand and gravel agreements on 6.3 million acres of school trust land and more than 100,000 acres of other state-owned land throughout Montana. The total number of leases managed is up 10.4 percent over the number in FY 1997.

The Minerals Management Bureau continues to provide general background information on bureau activities "online" on the department's website:

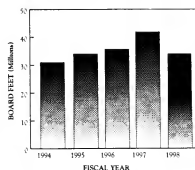
www.dnrc.mt.gov/trust/mmb.htm

A calendar of key lease sale activities and dates is posted, and lease sale lists and sale results are available for downloading.

Mineral Leasing

The mineral leasing program is responsible for reviewing and processing all mineral lease and permit applications; advertising, competitively bidding, and issuing new leases; reviewing and approving lease assignments; and collecting, verifying, and posting lease rentals and production royalties.

Figure 25. Timber Volume Prepared for Sale



Revenues received in FY 1998 are listed in Table 25; the relative percentage derived from each mineral type is illustrated in Figure 26.

Figure 26. Total Mineral Revenue by Mineral Type

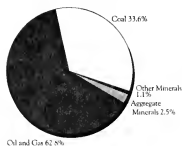


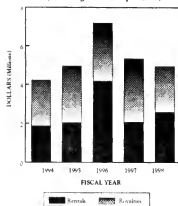
Table 25
Revenues Received from Minerals
in Fiscal Year 1998

Oil and Gas	Rentals/bonuses/penalties	\$2,400,550
	Royalties	2,810,151
	Seismic exploration	29,378
Aggregate Minerals	Rentals	100
	Royalties	208,845
Coal	Rentals	46,290
	Royalties	2,759,073
Other Minerals	Rentals/penalties	73,081
	Royalties	23,006
TOTAL		<u>\$8,350,474</u>

Oil and Gas Leasing

The mineral leasing program is responsible for the leasing and monitoring of 2,805 oil and gas leases, 468 of which are currently productive. The number of oil and gas leases managed is up 12.4 percent over the number in FY 1997. Activities related to existing leases include collecting, verifying, and posting rental, royalty, delay drilling, and shut-in payments; reviewing and approving assignments and tracking working interest ownership; reviewing and preparing for approval communitization agreements and unit operating agreements; and coordinating with field offices the review and approval of all proposed physical operations on state leases. In addition, four oral auctions of new oil and gas leases are prepared and conducted each year.

Figure 27. Oil and Gas Revenue (excluding Seismic Exploration)



In FY 1998, 1,107,564 barrels of oil were produced; 3,926,984 MCF of gas and 412,567 gallons of condensate were also produced. Revenues received over the last five fiscal years are shown in Figure 27. Oil production declined slightly, from 1,156,749 barrels in FY 1997. However, the drop in average price from \$19.58 per barrel in FY 1997 to \$15.06 per barrel in FY 1998 accounted for the majority of the decrease in oil royalty revenue. Gas production and price remained relatively static between FY 1997 and FY 1998, and royalty revenue received was virtually unchanged.

Other Mineral Leasing

The mineral leasing program also administers a wide variety of leases—including metalliferous and non-metalliferous leases, coal leases, gravel permits, and land use licenses for non-mechanized prospecting—for all other mineral activity on state trust land. Royalties from coal returned to their historical level, after a year of exceptionally high volume in FY 1997. A five-year summary of coal royalties is

shown in Figure 28. Royalties and rentals are also collected for minerals such as bentonite, clay, gold and associated minerals, peat, and shale. As with oil and gas leasing, the program also reviews and approves all proposed physical activity on the state leases.

Royalty Auditing and Accounting

The royalty audit program provides additional revenue to the school trusts through programmatic audits. The program serves an important role in identifying royalty under- and over-reporting, rectifying discrepancies, and raising the level of voluntary compliance.

In FY 1998, the department renewed a Memorandum of Understanding with the Montana Department of Revenue (DOR), thus reaffirming our commitment to continue working with DOR to conduct integrated audits coordinated by DOR's Natural Resources Bureau. As a result of the audit program, \$23,663 was collected in FY 1998, which is an 84 percent increase over the amount collected in FY 1997.

Abandoned Well Reclamation

The Board of Oil and Gas Conservation (BOGC) has regulatory and bonding authority on oil and gas wells in Montana, including those wells on state trust lands. BOGC seeks funding from the reclamation and development grants program, administered by DNRC's Conservation and Resource Development Division, to reclaim wells where there is inadequate bonding or no responsible party. The Minerals Management Bureau works with BOGC staff to integrate problem wells on state trust land into BOGC's grant requests.

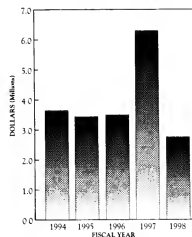
Riverbed Leasing

The Minerals Management Bureau continues its efforts to clarify title to the beds and islands of navigable rivers. The state owns, pursuant to statute, those lands below the low-water mark, islands and their accretions formed in the riverbeds after statehood, and abandoned channels formed by avulsion. Because two navigable rivers in Montana flow through areas with major oil and gas resources, the department has conducted numerous riverbed studies to determine and document state ownership of land. This process allows the state to take a progressive position in issues involving substantial royalties.

In FY 1998, the state received \$164,505 in oil and gas revenues from leased riverbed tracts. Other mineral leasing activity provided \$1,322 from riverbed tracts.

This same ownership review process is also becoming increasingly important in areas where surface development and/or use encounters beds, islands, and abandoned channels of navigable rivers. The department continues to work with the Montana Department of Fish, Wildlife and Parks (DFWP), BLM, USFS, and local landowners in the Kalispell area to determine whether the state owns several parcels with wildlife values in and along the Flathead River.

Figure 28. Coal Royalties



McDonald Mine Proposal

The McDonald Gold Mine, proposed near the town of Lincoln in Lewis and Clark County, would include state trust lands. The plan proposal for this open pit gold and silver mine was submitted in November 1994 by the Seven-Up Pete Joint Venture (SUPJV). Preparation of the joint environmental impact statement (EIS) involves multiple state and federal agencies, with the Montana Department of Environmental Quality, DNRC, and the U.S. Corps of Engineers serving as co-lead agencies.

In FY 1997, a revised draft alternatives report was produced, and the EIS team continued its analysis of potential impacts that could be generated by the proposed mine. In FY 1998, work continued on the joint EIS.

The status of the EIS review in FY 1999 is uncertain. SUPJV is assessing its interest in continuing with the mine permit review in light of two recent developments. First, in July 1998, DEQ issued a stop-work order on the EIS because SUPJV had failed to pay invoiced amounts due. SUPJV has thus far been unsuccessful in obtaining additional project funding. Second, a state initiative to outlaw open-pit mining and cyanide heap leaching in Montana has gathered sufficient signatures to place it on the November 1998 ballot.

Special Use Management

The Special Use Management Bureau administers all activities on lands classified as "other" and all secondary activities on lands classified as grazing, agriculture, or timber. Recreational use is considered a special use. The bureau's responsibilities include conducting the real estate functions associated with management of 5.1 million acres, including sales, exchanges, and grants and acquisitions of rights-of-way. The bureau is responsible for the commercial use of state lands, including developing new leases and administering existing leases. The bureau coordinates the issuance of land use licenses for shorter-term uses of state lands.

The sources of FY 1998 special use revenue are summarized in Table 26, and each is shown as a percentage of the total special use revenue in Figure 29. Income from special uses over the last five years is illustrated in Figure 30.

Figure 29. Special Use Revenues by Source in FY 1998

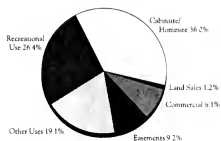


Figure 30. Special Use Revenues since FY 1994

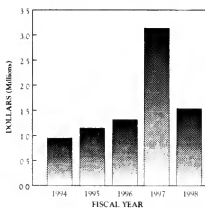


Table 26
Special Use Revenues in Fiscal Year 1998

Cabinsite and homesite leasing (795 agreements)	\$553,095
Easements (72 agreements)	141,989
Other special use leases and licenses	293,331
Recreational use	405,728
Commercial uses	125,030
Land sales	18,844
TOTAL	<u>\$1,538,017</u>

Leasing/Licensing

Interest in special uses of state trust lands has greatly increased in recent years and is expected to continue into the future. The department issued 90 new leases and licenses in FY 1998. The special use program is actively developing tracts of land with high potential for commercial leases in Great Falls, Bozeman, and Kalispell. Establishment of new leases and licenses for a multitude of special uses holds great promise for increased revenue to the trusts.

Exchanges

The department and the State Land Board developed a land exchange policy for the purpose of guiding applicants and the department in the review and processing of exchange proposals. Land exchanges are analyzed using the following criteria:

- Equal or greater land value
- Similar navigable lake or stream values
- Equal or greater income to the school trust
- Equal or greater acreage
- Consolidation of state trust lands
- Potential for long-term appreciation
- Improved or equal access to state or public lands

One exchange received preliminary State Land Board approval in FY 1998, and two received secondary approval. The bureau reviewed and denied several proposals for land exchanges that did not meet the criteria outlined in the policy. Other private and local government proposals are under review.

Crow Tribe Exchange

On November 2, 1994, the Crow Boundary Settlement Act (CBSA) was signed into federal law. The law includes a provision that, as part of the settlement, the Crow Tribe is entitled to the value of 46,625 acres of land originally located within the Crow Reservation as a result of the Crow Allotment Act of 1920. The first priority for returning this value of land to the tribe is for the Secretary of the U.S. Department of the Interior to negotiate with the State of Montana for the exchange of those remaining state trust lands (approximately 34,000 acres) within the reservation for public domain lands outside the reservation and administered by the U.S. Bureau of Land Management. Most of the state trust lands involved are currently leased by non-tribal lessees who have expressed concern over the possible change in ownership of these lands.

Efforts continue to comply with the direction of the CBSA regarding the exchange of state trust lands within the Crow Reservation. Two proposals have received secondary State Land Board approval, and in the next fiscal year, these first two phases of the exchange will be brought before the board for final consideration.

Land Sales

The bureau conducted one land sale in FY 1998. On behalf of the school trust, the bureau sold an existing homesite on state trust land in Toole County for \$18,844. In addition, the State Land Board has given preliminary approval for five additional land sales.

Land Transfers

The 1995 legislature passed MCA 77-2-352, which allows the state to transfer non-trust state land to a local governmental entity in return for a commitment that the property be used for a continuing public purpose. In FY 1998, easement fees were waived for the City of Missoula under the authority established in this law. Several additional requests for property transfers under this statute are pending.

Recreational Use

The recreational use program, established by House Bill 778 during the 1991 legislative session, is in its seventh year of development. Legally accessible state trust lands may be used for recreational activities by persons who hold state land recreational use licenses, provided the lands are not closed or restricted for such use by rule or by the department. The type of license required depends on the type of activity conducted. Licenses for "general" recreational use — which, with a few exceptions, includes most forms of noncommercial and nonconcentrated recreational activities — can be purchased from all DFWP license agents and DNRC area offices. "Special" recreational use licenses, which are available only from DNRC area offices, are required for concentrated recreational use conducted by groups or organizations, or for commercial activities such as outfitting.

From March 1, 1997, to February 28, 1998, which was the 1997 license year, 33,051 general recreational use licenses were sold. Additionally, 177 special recreational use licenses were issued for outfitting on state trust lands.

Rights-of-Way

The bureau is responsible for reviewing and processing applications for rights-of-way and easements across surface lands and navigable waterways administered by the state. Rights-of-ways are most commonly sought for utility lines, pipelines, and roads. Applications for private driveways have been increasing steadily over the past few years. This increase has lead DNRC and the State Land Board to develop a policy establishing criteria for review of these requests. The critical components of this private driveway policy evaluate the impact on the value of state trust land and the ability of state trust land to produce revenue. The policy also establishes a 30-year term for private driveway easements.

Reciprocal Access

The department is actively pursuing acquisition of access to isolated school trust lands to facilitate forest management and thereby provide increased revenue to the trusts. Ten reciprocal access agreements were reached in FY 1998, resulting in permanent easements to 19,393 acres of state land. The department granted easements for 55.86 miles of roads on state land and acquired 78.16 miles of easements on private and national forest system roads.

WATER RESOURCES DIVISION

Providing the most benefit, through the best use, of the state's water resources for the people of Montana.

The Montana Constitution affirms that the state's water resources are owned by the State of Montana and are to be used by its people. DNRC has the statutory responsibility to ensure that the state's water resources are managed to meet the existing and future needs of its citizens.

The Water Resources Division (WRD) is comprised of four bureaus — the State Water Projects, Water Management, Water Operations, and Water Rights Bureaus — and eight regional offices. The division employs approximately 113 persons with staff members stationed in Helena's central office and in the regional offices, which are located in Billings, Bozeman, Glasgow, Havre, Helena, Kalispell, Lewistown, and Missoula.

State Water Projects

The State Water Projects Bureau administers the operation, management, and rehabilitation of the state-owned dams, canals, and hydropower projects listed in Table 27 on the next page. Some of these are owned by DNRC; others are owned by the Department of Fish, Wildlife and Parks (DFWP). Most of the projects are operated by local water users associations that market the water for irrigation and other purposes. Debt repayment is derived from repayment contracts with water users and from leases of lands associated with the projects (see Table 28). The bureau ensures that the projects are operated and maintained in a safe, efficient manner and that repayment contracts are properly administered.

Project Rehabilitation

The project rehabilitation program identifies and corrects safety and operational deficiencies on state-owned projects. Projects rehabilitated or partially rehabilitated during FY 1998 include the Tongue River Dam and East Fork Rock Creek Dam.

Tongue River Dam

The Tongue River project will result in the rehabilitation, repair, and enlargement of the Tongue River Dam; partial fulfillment of the Northern Cheyenne Indian Reserved Water Rights Settlement Act; and the conservation, development, and enhancement of fish and wildlife resources and habitat in the Tongue River Basin. The project is a partnership involving the State of Montana, U.S. Bureau of Reclamation, and Northern Cheyenne Tribe. Construction on the rehabilitation of the dam is currently underway and scheduled to be completed in about one year at a cost of approximately \$48 million, which is cost-shared between the State of Montana and the federal government. The State Water Projects Bureau contributed engineering design review and project oversight for the Tongue River Project in FY 1998. The status of all project components is shown in Table 29.

Table 28
Leases Associated with
DNRC-Owned Water Projects

Lease Type	Number of Leases	Annual Revenues
Cabinsite	73	\$17,394
Grazing	04	1,703
Hay crop	03	2,936
Right-of-way	01	300
Minerals	01	800
TOTAL	82	<u>\$23,133</u>

Table 27
State-Owned Storage Dams
Managed by the State Water Projects Bureau

Dam	Height (feet)	Storage Capacity (acre-feet)	Year Completed	County
Dams Owned by DNRC				
* Ackley Lake	51	5,975	1938	Judith Basin
* Bair	102	7,029	1939	Meagher
Broadwater-Missouri	56	3,000	1940	Broadwater
* Cataract Creek	80	1,478	1959	Madison
* Cooney	102	28,140	1937	Carbon
* Cottonwood	39	1,900	1953	Park
* Deadman's Basin, Dam and Dike	60 & 18	76,900	1941	Wheatland
* East Fork Rock Creek (Flint Creek)	83	16,040	1938	Granite
* Fred Burr	50	516	1948	Ravalli
* Frenchman	44	3,752	1952	Phillips
* Glacier Lake, North and South	57 & 20	4,200	1937	Carbon
Lisk Creek	28	343	1938	McCone
* Martinsdale, East and North	49 & 91	23,080	1939	Wheatland
* Middle Creek (Hyalite)	125	10,184	1951	Gallatin
* Nevada Creek	88	12,640	1938	Powell
* Nilan, North and East	54 & 51	10,092	1951	Lewis and Clark
* North Fork Smith River	84	11,500	1936	Meagher
* Painted Rocks	143	32,362	1940	Ravalli
* Petrolia	59	8,360	1951	Petroleum
* Ruby	111	36,633	1939	Madison
* Tongue River	91	69,430	1939	Big Horn
* Willow Creek	105	18,000	1938	Madison
* Yellow Water, Dam and Dike	37 & 11	3,840	1938	Petroleum
Dams Owned by DFWP				
Ashley Lake	Kleindschmidt		Rush Hall Pond	
* Bearpaw	Knowlton Reservoir		Sleeping Buffalo	
Fox Lake	Lake Inez (Clearwater)		South Sandstone	
Freezeout Lake	Fish Barrier		Whitetail	
* Gartside	Ninepipe		Young Creek Fish Barrier	
Hungry Horse Fish Trap	Pike Marsh			
Johnson Reservoir	Rainy Lake Fish Barrier			

* High hazard dam - A "high hazard" dam is one whose failure would endanger lives. This classification is not a reflection on the actual condition of the dam.

Table 29
Status of Tongue River Project Components

Phase	Component	Comments/Status	Outlook
Phase I	Roads, aggregate, and site preparation	This phase is complete.	Not applicable.
Phase II	Roller-compacted concrete emergency spillway	Construction on Phase II, which began in January 1997, included overlaying 650 feet of the existing earthen embankment dam with a stair-stepped downslope, roller-compacted concrete emergency spillway and roller-compacted concrete stilling basin. A 400-foot temporary steel flume capable of carrying 1,600 cubic feet per second (cfs) from the existing outlet tunnel was also constructed. This phase was completed in October 1997.	Not applicable.
Phase II	Fish and wildlife enhancement	Enhancement projects were selected by the U.S. Bureau of Reclamation, Northern Cheyenne Tribe, and DNRC in August 1996. Most of the federal funds were directed toward projects on the reservation, and state funds were directed toward projects off the reservation. The state is responsible for off-reservation projects only, which include a fish screen at the T&Y irrigation diversion below the dam, an agreement with two irrigators to abandon the SH Canal headgate in order to prevent fish entrainment and increase instream flows, a conservation easement on the Hirsch Ranch near Miles City, and construction of a wetland south of the reservoir. The Hirsch Ranch conservation easement was purchased in FY 1997. The final design of the T&Y fish screen and the associated environmental compliance document were completed in June 1998.	Fish and wildlife enhancement issues continue to be negotiated.
Phase III	Primary spillway and outlet works	This phase, the largest of the Tongue River Project, includes construction of a four-cycle, mini-labyrinth primary spillway and stilling basin; construction of a new primary outlet tunnel, gates, and stilling basin; and reconstruction of the existing outlet works. Construction on this phase began in October 1997. Demolition of the of the existing primary spillway, construction of the new outlet tunnel, and stabilization of the foundation were accomplished in FY 1998.	Construction is scheduled to be completed in April 1999.
Phase III	State park and mitigation package	This bid package contains reconstruction of the state park necessitated by the raising of the reservoir. It also includes construction of a wetland and protection of embankments along Highway 314 and County Road 25. Bids were received in March 1998, and a contractor was selected in May.	Construction began in May 1998.

East Fork Rock Creek Dam

Additional instrumentation was installed in the dam as part of the 1996-1997 rehabilitation. The instrumentation has been automated, and the data are available on the department's Internet web site. The site lists the daily reservoir elevation, reservoir storage, piezometer measurements, and drain flows.

Lisk Creek Dam

The rehabilitation of Lisk Creek Dam took place in FY 1997. During FY 1998, final site cleanup and the removal of a portion of the outlet works were done. Approximately 40 feet of the downstream and 60 feet of the upstream portion of the conduit were removed, along with the gate-operating catwalk. The remaining portion of the conduit was plugged with a sand and bentonite mixture; then the embankment was replaced.

The ownership of the project will be transferred to the owners of the underlying property now that the rehabilitation has been completed.

Deadman's Basin Project - Inlet Diversion Dam

In August 1997, a large scour hole was discovered beneath the diversion structure on the Musselshell River. High flows in the spring and summer had washed out rock riprap and bed material under the structure, leaving it in imminent danger of failure. The State Water Projects Bureau formulated an emergency repair plan and solicited proposals from qualified contractors. The selected contractor began work in the fall, completing the repair in early December. The repair work included a temporary diversion of the Musselshell River. Compacted clay material was placed in the eroded section. River material and large rock riprap were used to complete the backfill both upstream and downstream from the diversion. A void within the concrete diversion structure was filled with lean concrete. The diversion was back in service for the 1998 irrigation season with no loss of service to the Deadman's Basin water users.

The project was completed at a total cost of \$195,672. The Federal Emergency Management Agency (FEMA) provided a 75 percent cost share, with the remainder of the cost paid for by the Deadman's Basin Water Users Association.

Deadman's Basin Project - Barber Canal

The Helena office and the Lewistown Regional Office are currently developing plans and project documents for the second phase of the Barber Canal rehabilitation project. This phase includes repair and enlargement of rock riprap stilling basins below three drop structures, canal bank stabilization using rock riprap, and canal excavation to increase capacity in the lower sections of the canal. The work was scheduled for bidding and construction in the fall of 1998.

The estimated cost of the Phase II work is approximately \$156,000. Funding sources include a \$48,000 renewable resource grant. The Deadman's Basin Water Users Association will provide the remaining funding.

The third phase of the project will include hiring a consultant to prepare a feasibility study and to complete designs for rehabilitation of the Barber Canal inlet

structure, three drop structures, and the county road and Highway 12 crossing structures. The fourth phase of the project will be the actual construction. This work will increase the flow capacity in the canal from the current 200 cfs to the desired 300 cfs, so that flows in Careless Creek can be reduced. A loan and grant application has been submitted in the amount of \$609,700 to fund the third and fourth phases of the project.

Broadwater-Missouri Pipe Span Project

Efforts to rehabilitate the pipe span over the Missouri River near Toston are continuing. Previous investigations of the pipe have led to the conclusion that the 72-inch-diameter, 666-foot-long steel pipe can be rehabilitated by repainting the exterior and recoating the interior. The Broadwater-Missouri Water Users Association is currently hiring a contractor to perform testing of paint coating for the pipeline exterior, as recommended by the consultant hired by the association to investigate the condition of the pipe span. The paint testing is scheduled to be done in the fall of 1998.

A renewable resource grant and loan request in the amount of \$509,426 has been submitted for the rehabilitation of the pipe span. The rehabilitation work will include repainting the pipe exterior, recoating the pipe interior, and repairing and repainting the steel pipe supports. An existing wooden walkway will be replaced, and cathodic protection will be installed on the buried portion of the pipe. If the loan and grant application is approved, a consultant will be hired to develop plans and oversee the construction activities.

Seepage Monitoring

Seepage monitoring programs are required as a condition of the operating permits for all of the regulated high hazard dams in Montana. During FY 1998, the department installed hand-driven groundwater observation wells in the embankments and toe areas at six department-owned high hazard dams: Ackley Lake Dam, Cottonwood Dam, Deadman's Basin Dam, Nevada Creek Dam, and Nilan East and North Dams. The hand-driven groundwater observation wells are the first step in monitoring the groundwater elevations and seepage in the dam embankments and the toe areas of the dams. The U.S. Bureau of Reclamation provided a drill rig to drill four holes through the crest of the dam at Deadman's Basin and install two piezometers in each of the drill holes. The monitoring wells and piezometers are measured bi-monthly during the irrigation season and monthly during the remainder of the year by department staff or the dam tenders.

The State Water Projects Bureau submitted a proposal to the renewable resource grant and loan program for a \$100,000 grant for the installation of additional drill holes and piezometers at Cottonwood Dam, Deadman's Basin Dam and Dike, Nilan East and North Dams, and Ruby Dam. These projects were chosen due to existing seepage concerns or the potential downstream hazard.

Project Management

The project management program administers the operation of the state-owned dams and oversees the repayment contracts with the water user associations. Additionally, the program protects water rights for the projects and oversees disposal of projects no longer appropriate for state ownership.

Project Disposition

The State of Montana originally became involved, many years ago, in various water conservation projects because there was a need for government to create employment opportunities and stabilize the agricultural economy. Governmental involvement in these projects no longer provides public benefits, and the projects are being transferred to private ownership. The listed activities were accomplished during FY 1998.

- Preliminary file reviews, financial status determinations, title searches, and field reviews were performed on three of these projects.
- Negotiations continued regarding the pending transfer of the Petrolia Reservoir project to the water users association following its rehabilitation (as mandated by legislation passed in 1995). The State Water Projects Bureau sold Theboe Lake, released Checkerboard Canal, and identified 22 additional projects for release.

Water Measurement and Water Rights Activities

The State Water Projects Bureau is responsible for all activities required to protect, defend, and maintain water rights for all state-owned water projects.

In FY 1998, the bureau collected and recorded bimonthly reservoir storage data for 17 state-owned reservoir projects, and it operated and maintained 29 permanent stream- and canal-gaging stations associated with state projects. This data collection included tabulating and recording annual discharge summaries for all stations for FY 1998.

The State Water Projects Bureau previously requested the Montana Water Court to clarify its project water rights by consolidating its claims, which were originally filed for five uses (storage, irrigation, stock, domestic, and municipal), into claims for "Sale of Water" for those same purposes. The proposed clarification of purpose would allow the place of use for the water to be described in more general terms, such as a general service area described by township, range, and county only. The proposed consolidation and clarification of DNRC's claims would not change the historical purpose of water use from the state projects, but only more accurately and concisely reflect that historical use. A decision on this issue is before the Water Court in Case No. 76HE-166 involving DNRC's Painted Rocks Reservoir project. A stipulation has been circulated but not completed by all parties in this case because of concerns of the U.S. Department of Justice on behalf of BIA, and similar concerns mirrored by the Washington Water Power Company: that the changes requested by DNRC in this forum would be precedent-setting in Montana water law and should not be granted without legal argument. The bureau continues to seek resolution of this issue. In FY 1998, to allay concerns voiced by project water users involved in the Painted Rocks case, the department formulated and adopted administrative rules regarding the sale of water from state-owned water projects.

In FY 1998 the State Water Projects Bureau continued settlement of unresolved objections and case work involving its state-owned water projects in various basins with water rights adjudications that are still in the temporary preliminary state.

Administration of Project Lands and Leases

DNRC owns land surrounding state-owned reservoirs, supply canals, and water delivery canals. These lands are unique and are administered under a special set of statutes.

The Department of Fish, Wildlife and Parks will construct a fishing access site at Ruby Reservoir. Construction involves widening the access road, building a parking area, trail construction to the river, modification of an existing footbridge to make it safer for the public, restroom facilities, and perimeter fencing around state-owned housing to provide security and privacy for the dam caretaker.

DNRC is in the process of selling the Fitzpatrick Ranch at Nevada Reservoir near Helmville. The house is on the National Register of Historic Places but is in need of maintenance and repair. The appraisal and survey work have been completed. Powell County, where the property is located, recently passed an ordinance restricting the sale of single family dwellings on less than 160-acre parcels in rural areas of the county. The bureau is in the process of requesting a variance to the ordinance because a single family dwelling already exists on the property and has since the 1870s, and because the condition of the buildings continues to deteriorate each year that they sit abandoned.

Noxious weed control is an ongoing problem at almost all of the department's projects. The six-year Noxious Weed Plans were developed and are now being implemented. Weed control costs are borne by the water user associations and are a costly proposition, in some cases, because of the extent of the infestations. At some of the reservoirs, the spread of weeds is obviously the result of dispersed recreational use by the public, making it extremely costly and difficult for the water users to manage. Weed management will continue to be a concern in the years ahead until a strategy can be developed to generate revenue for weed control from the recreational users.

The sale of property at Deadman's Basin Reservoir has been completed. The land was deeded to the cabin owners association on July 13, 1998. The sale encompassed 82 acres in all. Several covenants were placed in the property deed to ensure that the sale does not adversely impact the historical operation of the reservoir as an irrigation project.

Other projects are currently being evaluated for disposal of nonessential project property. Land management responsibilities and the associated costs and liabilities are factors motivating this process.

Hydropower

The hydropower program administers the development and operation of hydropower-generating facilities on state-owned water projects. To date, one hydropower facility, the Broadwater Power Project near Toston, has been built. With a maximum capacity of 10 megawatts, the project began generating power in June 1989.

DNRC owns and operates the facility and contracts with Montana Power Company (MPC) to sell the energy. Earned revenues are used to pay for rehabilitating other state-owned water projects. In an average year, the project generates roughly \$2.8 million in earned income from energy and capacity sales.

Income from energy sales will escalate each year of the contract, while income from capacity sales remains constant.

Department staff operate and maintain this hydropower plant, which includes performing numerous inspections and maintenance/repair tasks. Annual maintenance and repair require taking the plant off-line during the low power season, usually late summer. Department staff also respond to emergency situations involving plant shutdowns and mechanical/electrical problems. In addition, many obligations are ongoing with regard to dam safety, public safety and recreation, environmental mitigation, and other issues stemming from license oversight by the Federal Energy Regulatory Commission (FERC).

During the past year the hydropower staff completed several special projects. Obligations with regard to wildlife mitigation under the FERC license were fulfilled with the completion of the Toston Wetland Restoration Project. In addition, the emergency warning system at the East Fork Rock Creek Dam was improved to provide for automatic downloading of data and presented on an Internet web page on a daily basis.

The department intervened to monitor the utility restructuring process before the Public Service Commission. The department is concerned about potential impacts of restructuring on future revenue from the Broadwater Power Project, which is presently committed to paying off development bonds and rehabilitating projects such as the Tongue River Dam. In addition, the department filed suit in Broadwater County District Court against MPC for breach of contract. This action was initiated because of MPC's shutdown orders and resulting adjustments to project income. The department also filed suit in Lewis and Clark County against MPC to stop the transfer of the department's contract without the department's prior consent.

The 1997 spring runoff produced the highest flow on record at the stream gage below the project. High flows that exceed the turbine capacity reduce the project's generating capacity. High flow and heavy debris conditions extended into July 1997, resulting in significant off-line time. Despite a poor performance in July 1997, the project performed well the remainder of this fiscal year and surpassed revenue projections based on average river flow. Statistics concerning the Broadwater Power Project during FY 1998 are shown in Table 30.

Table 30
Broadwater-Missouri Power Project
in FY 1998

Operating availability	97 percent
Gross energy generation	62,018,000 kilowatt-hours
Gross revenue	\$3,086,529
MPC adjustments	(\$195,042)
Operating costs	\$2,340,000
Net income	\$551,487

Water Management

The Water Management Bureau (WMB) provides educational, technical, and other types of staff support in (1) developing and implementing statewide water resource plans and policies, and (2) assisting local watershed planning and working groups. Additionally, WMB staff provide technical assistance to other DNRC bureaus and water users in Montana.

Watershed Management

The water management staff worked in these watersheds in FY 1998:

Big Hole River	Ruby River
Bitterroot River	Sun River
Flathead River	Swan River
Flint Creek	Tenmile Creek
Lower Missouri River	Upper Clark Fork River
Milk River	Yellowstone River
Nevada Creek	
North Fork of the Blackfoot River	

Several examples of the bureau's watershed management activities are described below.

Big Hole River

WMB staff provided administrative and technical support to the Big Hole Watershed Committee. Staff assisted the U.S. Bureau of Reclamation (USBR) and the Montana Bureau of Mines and Geology (MBMG) in the design and implementation of hydrologic studies for determining the feasibility of a number of off-stream storage sites and the effects of irrigation on Big Hole River flows.

Staff coordinated the hydrologic and economic assessment of a proposed Ruby Creek site, which is on a tributary of the Big Hole. Presently, the project does not appear to be feasible.

Flint Creek

WMB staff completed a three-year return flow investigation for the local water users in the Flint Creek drainage. Staff provided the study results to the local water users for improving management of the watershed's surface water and groundwater supplies for irrigation, water quality, and fishery concerns. The investigation was coordinated with the U.S. Geological Survey (USGS) and USBR. The final report is available from WMB.

WMB obtained \$15,037 from USBR to continue monitoring diversion and surface water flows for an additional two years to refine and verify study results for improving local water management.

Lower Missouri River

WMB staff provided staff support to the Fort Peck Advisory Council in its efforts to develop more recreational opportunities around Fort Peck Reservoir. Staff

supported seven members of the advisory council in attending a number of meetings sponsored by the Missouri River Basin Association. These individuals represented Montana in negotiations to resolve differences among the different Missouri basin states. Their efforts were successful.

North Fork of the Blackfoot River

WMB staff are assisting local water users and the Blackfoot Challenge with a water conservation study for the North Fork of the Blackfoot River. WMB obtained a \$43,804 grant to conduct a three-year investigation, which began in the spring of 1997. USBR, USGS, and WMB staff installed river and diversion gages and have begun taking measurements.

Swan River

WMB staff helped Plum Creek Timber Company, EPA, Flathead National Forest, Flathead Lake Biological Station, and local water users conduct a two-year hydrologic investigation of the Swan River. The objective was to assess nutrients and organic loads in Swan River and Swan Lake, and then find ways to mitigate them. Staff installed five staff gages, developed rating curves for each gage, and then worked up the daily flow data.

Upper Clark Fork River

WMB staff provided staff support to the Upper Clark Fork Steering Committee. In addition to providing general technical assistance, WMB staff is studying ways to better manage the relationship between surface water and groundwater in the basin. WMB helped the committee receive a \$50,000 grant from EPA's Regional Geographic Initiative Program that is being used to examine the relationship between surface water and groundwater and to establish total maximum daily loads for water-quality-impaired and dewatered streams. WMB staff also provided secretarial support such as recording and preparing minutes of monthly meetings.

Upper Yellowstone River

WMB staff provided support to the Yellowstone River Task Force. Activities included coordination of special projects and events, setting up agendas, preparing minutes, and writing grants. Staff prepared a grant proposal for a cumulative effects investigation of the Upper Yellowstone River. This investigation will be a cooperative endeavor involving DNRC, other state and federal agencies, and Park Conservation District.

Protecting Montana's Water

DNRC has a statutory responsibility to protect Montana's water resources in interstate and international water allocation and management proceedings and decisions. Major activities of the WMB staff during FY 1998 are described below.

Missouri River Operations

WMB staff assisted DNRC Director Bud Clinch, who is the Montana representative to and the president of the Missouri River Basin Association, with interstate issues affecting the Missouri River Basin. Activities included reviewing

the Annual Operating Plans, assisting with association activities, and monitoring various congressional and federal activities that could have impacted the operation and management of the Missouri River in Montana.

Columbia River Basin Issues

As necessary, WMB staff provided advice and assistance to DNRC officials, the Northwest Power Planning Council, the Flathead Basin Commission, and the Governor's Office on the System Operation Review for the operation and management of the Columbia River drainage.

British Columbia

WMB staff coordinated communications with British Columbia and the State of Montana in an effort to protect the State's interests in the North Fork Flathead River Drainage.

Annual Poplar River Releases

WMB staff coordinated with Saskatchewan Water Corporation regarding the annual release of water from Cookson Reservoir into the East Fork of the Poplar River, in accordance with the International Joint Commission's recommended apportionment. The staff made sure that Montana received its rightful share of water.

Western Water Policy Review Advisory Commission

President Clinton and the U.S. Congress set up a broad-based group of politicians and western water leaders to review and recommend changes to national water policies as they affect western states. WMB staff reviewed and commented on two drafts of the commission's report and two special reports prepared for the commission.

Coordination of Water Resource Activities among Natural Resource Agencies

A number of the WMB staff are active members of the Watershed Coordination Council. The council is coordinating water resource activities among private, state, and federal agencies to ensure that government can provide more effective and efficient services to local watershed groups throughout Montana.

WMB staff participated on the planning committee that designed and carried out the successful Montana Watershed Conference which was held in December 1997.

Development of Drinking Water Supplies

WMB staff coordinated the state team that is trying to facilitate the planning and development of the North Central Rural Water Supply System. The team helped the Ad Hoc Committee obtain funding and presently is assisting the committee with the regulatory process. The Chippewa Cree Tribe of the Rocky Boy's Reservation and numerous community rural and municipal water systems are involved in the project. WMB staff oversaw expenditures from the \$220,000 appropriation that was received from the 1997 Legislature for the necessary feasibility studies. WMB staff also assisted with economic and financial aspects of

the project and evaluated alternative sources of water supply.

WMB staff administered the grant for planning of the Fort Peck Rural County Water District and assisted the district in seeking federal funds for construction of the system. Staff administered the contract between the district and DNRC and the contract between DNRC and the DNRC lobbyist.

Water Resource Education

The goal of water resource education is to provide citizens with the tools and knowledge to solve watershed and water resource problems.

WMB staff provided a two-day training course in Lewistown to water users and water commissioners on how to measure and distribute water in accordance with Montana water law.

WMB staff, associated with the Montana Watercourse, helped plan and conduct "Know Your Watershed" (KYW) workshops in the Stillwater basin in October and the Bitterroot River watershed in May. Over the past six months, WMB staff has been working with water users in the Milk River drainage and with tribal members on the Rocky Boy's Reservation to hold KYW workshops in FY 1999. Staff also assisted with the initial planning phases of a Helena KYW process and developed a Gallatin watershed source book that was a spin-off of the October 1996 Gallatin KYW workshop. At the Montana Watershed Conference in December, staff conducted a mini-course on how to conduct a KYW workshop. WMB staff also drafted a "Know Your Watershed Facilitator Training" course and has begun to initiate the preparation of a "Know Your Watershed Facilitator's Guide."

WMB staff planned and held a three-day workshop for teachers within the Flathead basin. The workshop was designed to help teachers learn how agencies and user groups manage and use water within the Flathead basin. Teachers were encouraged to use this information in their classrooms. Based on teacher surveys after the conference, it was very successful.

Groundwater Management

WMB staff compiled groundwater data and established temporary groundwater-monitoring networks southwest of Whitehall and in the Gallatin Valley to better resolve water right disputes.

WMB staff assisted with the design, financing, and implementation of the Medicine Lake groundwater study in Sheridan County in cooperation with Sheridan County Conservation District.

WMB staff spent considerable time working with the regional water rights offices reviewing and analyzing groundwater permit applications and water right complaints, assisting with the Yellowstone National Park groundwater monitoring, and setting up controlled groundwater areas. WMB staff participated as members on the Yellowstone National Park Technical Oversight Committee and the Groundwater Assessment Steering Committee.

WMB staff completed a groundwater assessment of the Beaverhead River and upper tributaries to determine the effects of groundwater withdrawals on surface flows and existing water rights. Results are available from WMB.

State Water Plan

WMB staff have been working with various users, educators, legislators, and local, state, and federal employees in preparing the comprehensive groundwater section of the State Water Plan. The plan section will be adopted by late fall of 1998.

WMB staff have been working with DEQ (the lead agency) and the Montana Wetland Council in developing a Montana wetland strategy. DEQ may wish to take it through the state water planning process and include it as a section of the state water plan.

Drought

WMB staff held four meetings of the Drought Advisory Council in 1998. DNRC is required by statute to hold two Drought Advisory Committee meetings annually and submit a drought status report to the governor each April. WMB staff developed agendas and provided other types of staff support to the Drought Advisory Committee. The committee is responsible for implementing the Montana Drought Response Plan. The report defines different trigger indices which in turn would initiate appropriate drought response actions.

WMB staff prepared a statewide water supply and moisture report monthly and distributed it to local, state, and federal governments; statewide news media; and other interested parties.

Other Water Management Bureau Activities

WMB staff completed reservoir operation guidelines for a number of state-owned water projects. The guidelines are to be used during above-average snow pack conditions to prevent flooding and reservoir problems.

WMB staff completed a research project on the legal, institutional, and administrative procedures used by other western states to manage surface water and groundwater conjunctively. This issue is becoming more important as more surface water basins are being closed to new appropriations and water users are turning to groundwater to find available water.

WMB staff had discussions with Washington Water Power on the relicensing of its hydropower facility at Noxon Rapids. A WMB staff member is on the water resources and the fisheries working groups. In preparation for these meetings, staff analyzed Clark Fork River flow data, water rights information, and the effects of the power company's senior water rights on junior water users in the basin.

WMB completed an assessment of the legal availability of water upstream from Montana Power Company's hydropower facilities. This analysis is being used to address a number of water permit applications that are pending before the Montana Water Court in Bozeman.

WMB staff provided the Montana Environmental Quality Council and legislators with information on the impacts and effects of the sale of Montana Power Company's hydropower facilities. WMB staff also assisted DEQ in an effort to ensure that the relicensing of Montana Power Company's hydropower facilities on the Missouri River by FERC will not impact other water users and interests in

Montana. Staff conducted hydrologic investigations of the Missouri River, assessed the value of MPC's water rights, analyzed headwater benefits, and determined the impacts of MPC's water rights on junior water users. A staff member is on the Water Quality Technical Oversight Committee. Staff are waiting to review the final FERC EIS.

WMB staff is coordinating the completion of a major investigation determining arsenic transport and mobility in surface water and groundwater of the upper Missouri River basin. Arsenic levels in the upper Madison and Missouri rivers are high and pose a significant problem in the upper Missouri that affects future irrigation development. This study is in cooperation with USBR, USGS, Montana State University, and the University of Montana. The investigation will be completed in December 1998.

WMB staff worked with USBR in helping local irrigation districts solve water management and distribution concerns within the Milk River basin. A \$75,000 three-year grant was obtained to help the irrigation districts better understand how water is used and managed within the drainage and to learn about water conservation approaches for improving the management of existing water supplies. An additional \$60,000 was obtained by WMB to assist DNRC in developing a GIS data base containing information on Milk River water rights and irrigated land and to help the Milk River irrigation districts establish ARCVIEW for improving basin-wide water management.

WMB staff assisted the T & Y Canal water users by installing and operating a gaging station on the canal. The gaging station will be operated by DNRC until reconstruction of the Tongue River Dam is completed, after which it will be turned over to the canal company.

WMB staff also assisted the Water Operations Bureau in designing spillway standards.

Water Operations

The Water Operations Bureau administers dam safety, floodplain, and water measurement programs and provides staff support for the Board of Water Well Contractors.

Dam Safety Program

The purpose of the dam safety program is to ensure that dams that have the potential to cause loss of life downstream, if they fail, are properly constructed, maintained, and operated. Approximately 90 dams in the state are regulated. These dams are defined as high-hazard because of their potential to cause loss of life. Operation permits have been issued to those high-hazard dams that have been found to be safe.

Permitting of High Hazard Dams

All high hazard dams regulated by DNRC must have an operation permit. To obtain or renew an operation permit, the dam owner must review and update the dam's emergency action, operation, and maintenance procedures and have an

inspection conducted by a professional engineer. Often, conditions placed on an operation permit require that certain dam deficiencies be addressed. Failure to meet the conditions of an operation permit can result in a restriction on the reservoir level and/or a fine. The department issued or renewed 8 operation permits, performed 11 hazard classifications, and approved 4 construction permits during the fiscal year.

Public Awareness/Education

This year's dam safety conference was a full day of technical papers in Missoula. A record number of engineers, dam owners, and dam operators attended.

Extreme Precipitation Study and New Spillway Standards Committee

The basis for the state's inflow design standards for spillways is now the probable maximum flood for the drainage area upstream. The dam safety program is continuing with its study of extreme precipitation events in an effort to change these standards to risk-based. The Montana District of USGS is conducting the study. Risk- or probability-based standards would allow the dam safety program to better qualify and quantify inflow design floods for dam spillways and better define spillway reliability. Risk-based standards would also be more reasonable to the dam owner, yet would afford acceptable protection levels for the public.

The first phase has been completed. This phase consisted of developing a method to determine total precipitation by conducting analyses of historical precipitation maxima. The results indicated that Montana contains three regions in which historical precipitation is statistically homogeneous. Grouping together the station maxima within each region allows estimates of precipitation depths for up to a 5,000-year return period. The results of this phase have been published in a USGS Water Resources Investigations Report (97-4004), *Regional Analysis of Annual Precipitation Maxima in Montana*. Methods of constructing synthetic storm hydrographs have been developed, utilizing the results of the phase one report.

The second phase was completed in FY 1997, and a report is to be published soon. This phase was also statistically-based and resulted in likely distributions for various storm durations in a given region of the state.

A Spillway Standards Committee was formed to develop new, statistically-based spillway standards for DNRC-regulated high hazard dams. The committee consists of 18 members with a wide range of backgrounds, from technical people to residents living downstream of dams. The goal of the committee is to make a recommendation to the department for new spillway standards by the fall of 1998. From this recommendation, the department will draft and conduct hearings on new proposed rules to adopt the spillway standards.

Seepage Monitoring of High Hazard Dams

The dam safety program has taken the lead in promoting monitoring of seepage at dams. Seepage and the associated piping of embankment or foundation material are the leading cause of failures in embankment dams. The goal of monitoring the seepage is to provide long-term records of seepage flows and groundwater levels, which can be analyzed to determine whether possibly dangerous situations exist when the flows and levels change over time. All dam owners have submitted seepage monitoring plans and are now in the process of implementing them.

Board of Water Well Contractors

The Board of Water Well Contractors is responsible for licensing water well drillers, water well contractors, and monitoring well constructors. The board, which is attached to the Department of Natural Resources and Conservation for administrative purposes, establishes water well construction standards and enforcement and training procedures. Composed of five members, the board consists of one technical advisor/hydrogeologist appointed by the Montana Bureau of Mines and Geology (MBMG), two licensed Montana water well contractors appointed by the governor, one member appointed by the DNRC director, and one member appointed by the DEQ director. Each member serves a three-year term. Current board members are:

<p>Par Byrne, Chair Great Falls Well Driller</p>	
<p>Laurence Siroky, Vice Chair Helena DNRC</p>	<p>Robert N. Berganrino Butte MBMG</p>
<p>Eric Regensburger Helena DEQ</p>	<p>Kevin Haggerty Bozeman Well Driller</p>

Licensing

During FY 1998, 331 people were licensed in three categories: water well contractors, monitoring well constructors, and water well drillers. Twenty-nine of these were new licensees. Twenty former licensees did not renew their licenses.

Complaints and Investigations

This year, 69 written complaints were received, out of 313 initial inquiries. Thirty-eight of the complaints were investigated for violations. Three faulty wells were repaired by the licensee without board action. Disciplinary actions are pending against two drillers.

Public Awareness/Education

The Board of Water Well Contractors and the Montana Environmental Training Center held 10 continuing education classes and approved four programs by suppliers and manufacturers for continuing education credit. Water well inspector exams were given to two regional office staff persons.

A newsletter, *Well Developments*, is published and distributed to license holders and other interested persons.

Floodplain Management

The Floodplain Management Section is responsible for the oversight of 110 locally administered floodplain management programs throughout Montana. The primary goal of the program is to reduce the loss of life and structural property through wise floodplain development. The secondary goals are to reduce the loss of functional floodplains and reduce the amount of erosion of stream banks due to unwise floodplain development.

Projects

A number of floodplain restudies were initiated over the last year with the Federal Emergency Management Agency (FEMA), the U.S. Army Corps of Engineers, and the U.S. Natural Resources Conservation Service (NRCS). NRCS finalized the lower Gallatin River flood study and initiated work on the Yellowstone River from Springdale to Greycliff. The Corps restudied Sand Coulee Creek and the Sun River (in Cascade County) and Prickley Pear Creek and Trout Creek (in Lewis and Clark County), and it also initiated a study for the City of Roundup. FEMA completed a restudy of Alkali Creek for the City of Billings and Yellowstone County.

A number of local floodplain management programs were evaluated during the year for compliance and overall program performance.

The program provided many forms of technical assistance to property owners, state and federal agencies, consulting firms, and congressional offices. Approximately 200 written responses plus more than 4,100 telephone contacts were made in FY 1998.

Public Awareness/Education

Staff provided support to the Upper Yellowstone Task Force by providing flood information and inventory assistance. The Upper Yellowstone Task Force was formed to address the many competing uses on the river and recent actions to repair 1998 flood damages.

A newsletter, *Highwater*, is published and distributed to local government floodplain officials and others.

Other Activities

Assistance was provided to Sanders County to prepare a renewable resources grant application. The grant would be used to delineate the Clark Fork floodplain from Paradise to Thompson Falls.

The program manager represents Montana on the National Association of State Floodplain Managers and has acted as the regional director for FEMA Region VIII. Other activities include the ongoing duties of being the community assistance program manager and the state floodplain manager for Montana of the National Flood Insurance Program.

FEMA is continuing with a relatively new program, titled the Flood Mitigation Assistance Program, and DNRC's floodplain management program will manage and coordinate \$130,000 in grants.

The City of Livingston is preparing a county flood mitigation plan and has identified several flood damage reduction measures. Sanders County prepared a flood mitigation plan, as well.

Water Measurement Program

The purpose of the Water Measurement Program is to provide technical information and/or water measurement requirements regarding diversions from streams where chronic dewatering has caused water use disputes or severe dewatering impacts.

Big Hole River

In January 1998, the DNRC decision to designate the Big Hole River as a chronically dewatered watercourse was again postponed for one year. The Big Hole Watershed Committee, a group composed of basin water users, conservation groups, and government advisors, continues to make progress in developing a drought year response plan and other water management objectives. Program staff actively participate in the watershed committee and are currently involved in water supply analysis for possible small storage sites in the upper basin. Stored water would be used to augment low summer flows, which negatively impact fluvial arctic grayling populations.

Jefferson River

Although the Jefferson River has not been formally designated as a chronically dewatered watercourse, program staff and local irrigators are working together to install measuring devices on six major diversions in the Jefferson Valley. The DNRC Conservation and Resource Development Division awarded a grant to Jefferson Valley Conservation District to purchase a water measurement flow meter. DNRC staff is providing training and assistance to the conservation district and irrigators in using the flow meter instrument.

Musselshell River

Installation of measuring devices continues on Musselshell River diversions. Informational meetings were held in Roundup and Harlowton this April to inform water users of program requirements and to provide information (types, suitability, and installation considerations) regarding measuring devices. Five field trips were conducted to spot-check compliance and provide technical assistance to individual water users.

Mill Creek

Measuring devices have been installed on most of the major diversions from Mill Creek, a Yellowstone River tributary in Paradise Valley. Individual meetings are being scheduled with water users to evaluate diversions, explain the program and its requirements, and assist in device maintenance and record keeping.

Water Rights

The mission of the Water Right Bureau is to ensure the orderly appropriation and beneficial use of Montana's waters. The two main programs are (1) adjudication, where the bureau assists the Water Court in identifying and evaluating pre-1973 water uses,

and (2) new appropriations, which involves the administration and regulation of post-1973 water rights in Montana.

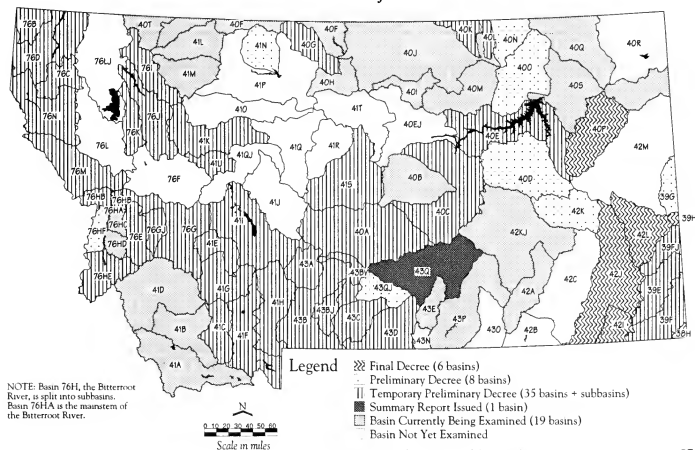
Water rights staff in the Central Office processed an 8- to 10-year backlog of almost 17,000 adjudication files from the Water Court and new appropriations files that had been verified by staff. The adjudication claim files are the result of Water Court actions in various basins. The water masters and claimants had changed the parameters on these claims. The Central Office staff updated the computer records, microfilmed the documentation, and distributed the film to DNRC regional offices. The new appropriations files were completed projects that had been field-inspected by DNRC regional staff. As a result of the inspection, the bureau's records were updated to reflect the actual projects. The field inspection reports were microfilmed and the new film distributed to the regional offices. Staff completed this project in approximately three months while keeping current with all other work.

Adjudication

During FY 1998, 3,010 claims in non-decreed basins were examined in six of the eight Water Resources Division regional offices. Staff in these offices were also heavily involved in providing post-decree assistance to the Water Court. Regional office staff joined the court in working with hundreds of citizens to resolve issues and disputes on pre-1973 water use claims. Staff were also heavily involved in preparing a summary report for the Big Hole River basin.

The Water Court issued a Preliminary Decree in January 1998 for a Bitterroot subbasin, 76HF, which is known as the "Westside Subbasin" (see Figure 31). Following the decree

Figure 31
Montana General Adjudication Status



issuance is an opportunity to file objections to the decree. When the objection period is completed, the issues identified will be heard by the Water Court. This was the first decree issued as a result of legislation passed during the last session that allows the Water Court to move directly to a Preliminary Decree, bypassing the previous Temporary Preliminary Decree stage and thus providing enforceable decrees to the citizenry more quickly.

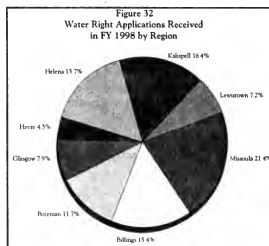
New Appropriations

Applications for various types of water rights are received each year. Table 31 shows the number and types of applications and notices received and processed during FY 1998. These water right applications vary in complexity depending on each region's water supply, area-specific competition for water, and the specific project request. Staff in the division's eight regional offices process these applications and notices, and Figure 32 indicates where this water development is located.

Table 31
Water Right Applications
in Fiscal Year 1998

	Received	Processed
Permits	258	269
Changes	158	198
Groundwater certificates	2,645	2,857
Water right transfers	3,679	3,288
Extensions	64	61
Stockwater permits	273	195
Verifications	0	47

Figure 32
Water Right Applications Received
in FY 1998 by Region



When applicants and objectors are unable to settle their differences, the file moves into the hearings process. During FY 1998, 31 files were sent to the Hearings Unit, and 16 hearings were held. Although a few of the hearings requested during FY 1998 have not yet been held, parties often settle cases after the hearing is scheduled.

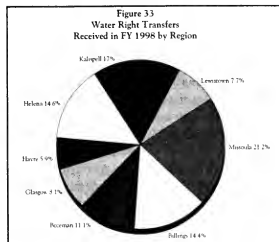
A controlled groundwater area in Bozeman, Montana, was proposed during FY 1998, and the order was issued early in FY 1999. This controlled area will be important to groundwater quality remediation efforts in the area.

Water Right Ownership Updates (Transfers)

During this fiscal year, 3,679 water right ownership update (transfer) forms were received. This is a 10.5 percent increase over the number of forms received during FY 1997. When ownership of land in Montana changes, water rights may – or may not – follow the land's ownership. It is extremely important that buyers and sellers discuss and identify the disposition of water rights in land transactions. It is the seller's responsibility to ensure that the water right's ownership is changed in the department's records. These records are used to inform water right owners of proposed development, changes, and Water Court proceedings that could impact their water rights. Legislation requiring a water right disclosure at or before closing a real estate transaction became effective January 1, 1998, and appears to have

increased compliance with the requirement to transfer water right ownership. Regional and Central Office staff were heavily involved in a public outreach project to educate real estate professionals, title companies, consultants, and county clerks of the new requirements that resulted from this disclosure law.

Figure 33 displays each region's transfer activity during FY 1998.



Regional Offices

The primary function of the division's eight regional offices is to work directly with the public in implementing programs for which the division is responsible. The regional offices play a large role in the accomplishments reported concerning the division's programs. In addition, there are areas of special interest in the work of the regional offices over the past year that are highlighted here.

Public Assistance and Dispute Resolutions

During FY 1998, the regional offices continued to have significant levels of public interaction. For many division programs, the regional offices are the primary point of public contact. Several of the offices respond to between 5,000 and 10,000 walk-in, telephone, and fax contacts per year. The regional offices responded to scores of conflicts and complaints in FY 1998. Through intervention and mediation, regional office staff were able to resolve the majority of these complaints without formal action by the division or the parties.

Regional staff continued in the past year to provide education and training to many groups throughout the state. Training on water measurement techniques was provided to water commissioners and others, including providing an instructor for the Montana Envirothon. Several offices hold regular training sessions on water rights filing procedures and data retrieval that are popular with realtors, title abstractors, and paralegals. Offices participate in local "Know Your Watershed" workshops.

Regional offices continue to increase their role as liaison with conservation districts and with water user associations, especially those that contract for water from state-owned projects. The Billings Water Resources Regional Office co-located with the department's Trust Lands and Forestry Eastern Area Office and also brought in staff of Yellowstone Conservation District.

Geographic Information System

The division is continuing to develop a geographic information system (GIS). As part of the Helena Regional Office, the system, and the one employee who operates it, provide support for all division programs and are involved with the division's direct public service activities. GIS is being developed for use in administration of the Yellowstone Park Controlled Groundwater Area identified in the compact between Montana and the National Park Service. Geo-positioning system technology is being incorporated into this GIS use. The division has entered into a contract with the Geographic Data Development Center at Montana State University for products to be used in mapping basins being decreed by the Montana Water Court in the statewide water rights adjudication. GIS was used for mapping of water rights data in support of the stakeholder consultation process in the relicensing of Washington Water Power's facilities in Montana. In addition, the Missoula Regional Office has developed a successful first-generation pilot project using a GIS approach to tracking water right ownership by overlaying county electronic ownership data and water rights place-of-use data, which may well be a strong first step toward a fully automated water rights ownership system.

Decentralization

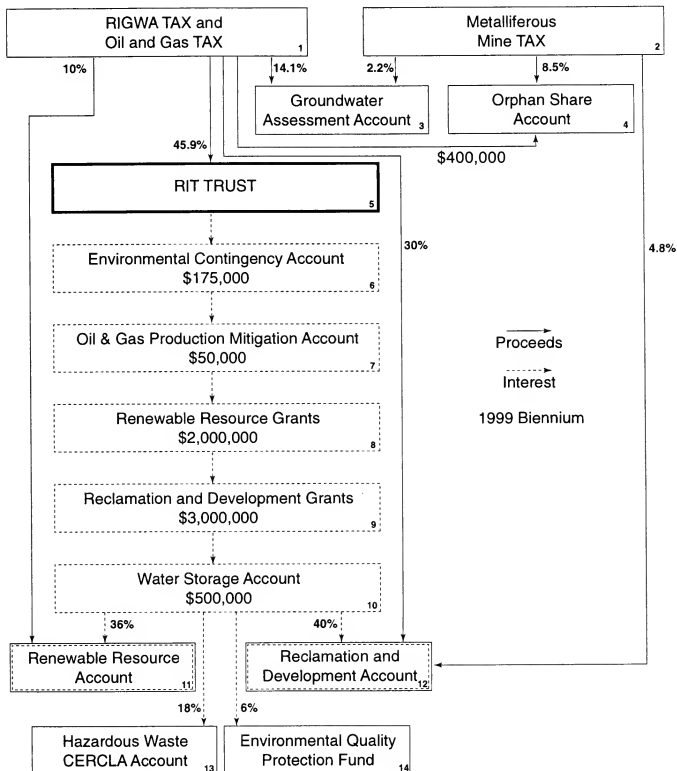
The level and efficiency of monitoring state-owned dams and reservoirs have increased through greater involvement of the staff in the regional offices. Regional office staff are increasingly in a lead role on projects related to the state-owned water facilities. Billings provides the on-site engineer for the state park reconstruction as part of the Tongue River Dam rehabilitation project. Lewistown engineering staff took a lead role on several projects, including rehabilitation of the Lisk Creek project prior to transferring ownership to McCone County, design and supervision of the Barber Canal road-crossing repair, and grant writing for the Deadman's Basin water quality improvement project to rehabilitate portions of the Barber and Careless Creek Canals. The Helena Regional Office provided engineering oversight and contract compliance monitoring for the Broadwater-Missouri wetland mitigation project. Regional office staff continue to assist local communities in the delineation of floodplains in such places as Roundup, Sand Coulee, and the Clarks Fork of the Yellowstone.

The Havre staff is examining water right claims on the Blackfeet Reservation, and the Billings staff is examining claims on the Crow Reservation, as part of the negotiation process for forming a compact with the Tribes. Bozeman staff is examining claims on the Red Rock River as part of the compact for Red Rocks National Wildlife Refuge. The Bozeman office also processed and authorized an instream water right lease by the Montana Department of Fish, Wildlife and Parks on Mol Heron Creek in Park County under the statutory water leasing program. Staff in Havre and Glasgow have been the primary contacts and processing coordinators for the large West Crane Irrigation Project water right application. Glasgow staff members have played a vital role in obtaining \$3.36 million dollars in FY 1998 federal funds for construction of the Fort Peck Rural Water System. They have also been facilitating cooperation among state agencies, local irrigation districts, and the U.S. Bureau of Reclamation in preparing management plans required under USBR's field services program.

APPENDIX A

**FUNDING INFORMATION
CONCERNING THE
RESOURCE INDEMNITY TAX
AND THE COAL SEVERANCE TAX**

Allocation of RIT Proceeds and Interest



1. The **Resource Indemnity Groundwater Assessment Tax (RIGWA)** is a 0.5 percent tax of the gross value of the product of all mineral mining. The tax was originally created in 1973. Mineral production, including coal, metals (gold, silver, copper, lead), talc, vermiculite, limestone, and other “nonrenewable merchantable products extracted from the surface or subsurface of the state of Montana” (MCA 15-38-103), is taxed. Senate Bill No. 412 revised the tax structure for oil and natural gas production in Montana by combining a number of different taxes into one tax. This single tax is distributed to local and state agencies. One component was to remove the RIGWA tax on oil and natural gas and instead allocate 10.7 percent of the new combined tax in the same manner that the RIGWA tax is allocated (SB 412, Section 18). This change is intended to be “revenue neutral.”
2. The **Metalliferous Mine Tax** is a tax on “annual gross value of product” of all metal mine production or precious or semiprecious gem or stone production (MCA 15-37-101 et seq.). The tax rate is 1.81 percent of the annual gross value over \$250,000 for concentrate shipped to a smelter, mill, or reduction work (MCA 15-37-103). For gold, silver, or any platinum-group metal that is dore, bullion, or matte and that is shipped to a refinery, the tax rate is 1.6 percent of the annual gross value over \$250,000 (MCA 15-37-103).
3. The **Groundwater Assessment Account** was created in 1991 (MCA 85-2-901 et seq.). The purpose of the account is to fund a statewide groundwater assessment program that will monitor quantity and quality of the state’s groundwater. The program is staffed by the Bureau of Mines and Geology in Butte. An oversight committee reviews all expenditures, approves monitoring sites, prioritizes areas, coordinates information, and evaluates reports.
4. The **Orphan Share Account** was created in 1997 (Senate Bill No. 377 and House Bill No. 584). The purpose of this fund is to provide funding for remediation and reclamation projects where the party responsible for the contamination no longer exists. The Department of Environmental Quality is charged with administering the account. For projects where there are multiple parties, the state will participate in the negotiations to ensure that a fair allocation of the responsibilities for cleanup is made. In these cases a lead party will be responsible for proceeding with cleanup. All parties would participate financially, to the extent that they were responsible for the contamination. The portion of the contamination caused by parties that no longer exist is called the “orphan share,” and these costs may be reimbursed if funds are available within the Orphan Share Account. If sufficient funds are not immediately available, reimbursements will be made over time as funds are deposited into the account.
5. The **Resource Indemnity Tax Trust (RIT Trust)** was created in 1973. No funds that are deposited into the trust can be spent until the total deposits exceed \$100 million. This protection is provided in Article IX, Section 2 of the Montana Constitution. Trust fund proceeds are invested, and the interest earnings are distributed to several natural resource programs.

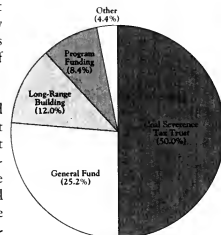
6. The **Environmental Contingency Account** was created in 1985 (MCA 75-1-1101 et seq.). The governor has the authority to approve expenditures from this account to meet unanticipated public needs. Specifically, the statute limits projects to the following objectives: (a) to support renewable resource development projects in communities that face an emergency or imminent need for the services or to prevent the failure of a project; (b) to preserve vegetation, water, soil, fish, wildlife, or other renewable resources from an imminent physical threat or during an emergency, not including natural disasters or fire; (c) to respond to an emergency or imminent threat to persons, property, or the environment caused by mineral development; and (d) to fund the environmental quality protection fund. Each biennium \$175,000 of the RIT trust interest earnings is allocated to this account. The balance in this account cannot exceed \$750,000.
7. The **Oil and Gas Production Damage Mitigation Account** was created in 1989 (MCA 85-2-161). The Board of Oil and Gas Conservation may authorize payment for the cost of properly plugging a well and either reclaiming and/or restoring a drill site or other drilling or producing area damaged by oil and gas operations. The site must be abandoned, and the responsible person either cannot be identified or refuses to correct the problem. Each biennium \$50,000 of the RIT trust interest earnings is allocated to this account. The balance in this account cannot exceed \$200,000.
8. **Renewable Resource Grants** receive \$2 million in RIT trust interest earnings. The renewable resource grant and loan program was created in 1993 by combining the renewable resource development program and the water development program. The purpose of the grant program is to fund projects that conserve, develop, manage, and preserve water and other renewable resources. The program provides preference to projects that support the state water plan. Projects include construction and rehabilitation of existing water supply systems and wastewater systems, educational efforts, feasibility studies, development of water storage, enhancement of renewable resources including recreation, reduction and advancement of agricultural chemical use, and improvement of water use efficiency (MCA 85-1-602).
9. The **Reclamation and Development Grants Program** was established in 1987. The purposes of the program are: (a) to repair, reclaim, and mitigate environmental damage to public resources from nonrenewable resource extraction; and (b) to develop and ensure the quality of public resources for the benefit of all Montanans (MCA 90-2-1101). Projects have included plugging abandoned oil and gas wells, reclaiming mine sites, controlling nonpoint source pollution, researching new technologies for mine waste cleanup, conducting groundwater studies to determine the extent of contamination, and cleaning up pesticide contamination. A minimum of \$3 million of RIT trust interest earnings is allocated for these grants.

10. The **Water Storage Account** was established in 1991 (MCA 85-1-701 et seq.). The purpose of the account is to provide funding for projects that rehabilitate existing water storage facilities or develop new ones. Priority is given to high hazard, unsafe dams. Each biennium \$500,000 of RIT trust interest earnings is deposited into this account. Currently, the only project to receive water storage account funding is the rehabilitation of the state-owned dam on the Tongue River in eastern Montana.
11. The **Renewable Resource Grant and Loan Program** state special revenue account receives 36 percent of the remaining interest earnings from the RIT trust and 10 percent of the RIGWA tax proceeds. This special revenue account also receives revenue from state water projects, excess deposits in the renewable resource debt service account, and other administrative fees. The revenues are used to fund natural resource agency projects and administration, including the Department of Natural Resources and Conservation, Governor's Office, Water Court, and State Library.
12. The **Reclamation and Development Grants Program** state special revenue account receives 40 percent of the remaining RIT trust interest earnings, 30 percent of the RIGWA tax proceeds, and 4.8 percent of the Metalliferous Mine Tax. The revenues are used to fund projects and administration of natural resource agencies, including the Department of Natural Resources and Conservation, State Library, Reserved Water Rights Compact Commission, Department of Environmental Quality, and Environmental Quality Council.
13. The **Hazardous Waste CERCLA Account** is administered by the Department of Environmental Quality. CERCLA stands for the federal Comprehensive Environmental Response, Compensation, and Liability Act. This account receives 18 percent of the remaining RIT trust interest earnings. The account was established in 1983 and is to be used to make payments on CERCLA bonds, implement the Montana Hazardous Waste Act, and provide assistance in remedial action under CERCLA.
14. The **Environmental Quality Protection Fund** was established in 1985 and is administered by the Department of Environmental Quality. This account receives 6 percent of the remaining RIT trust interest earnings. The purpose of this account is to provide funding for remedial actions taken by the department in response to a release of hazardous or deleterious substances.

COAL SEVERANCE TAX TRUST

Within 30 days of the end of each calendar quarter, coal severance taxes are paid to the state, 50 percent of which are deposited in the **Coal Severance Tax Trust Fund** (the Trust) by the Department of Revenue. Five accounts are established within the Trust: (1) the **Coal Severance Tax Bond Fund**, (2) the **School Bond Contingency Loan Fund**, (3) the **Treasure State Endowment Fund**, (4) the **Coal Severance Tax Permanent Fund**, and (5) the **Coal Severance Tax Income Fund**.

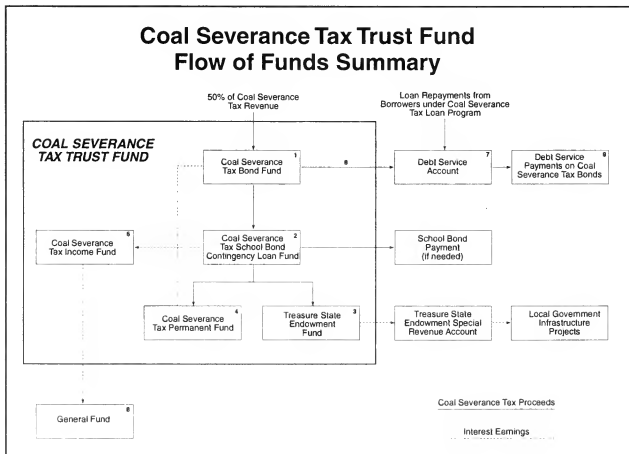
- Coal tax revenues that flow into the trust are initially deposited in the **Coal Severance Tax Bond Fund** (Bond Fund) and made available for payment of debt service on Coal Severance Tax Bonds (see footnotes 7, 8, and 9). The Department of Natural Resources and Conservation (DNRC) informs the Department of Revenue, during the first quarter of each state fiscal year, of the amount necessary to meet all principal and interest payments on bonds payable from the Bond Fund for the next year (two semi-annual payments). The Department of Revenue retains that amount in the Bond Fund.
- The January 1992 Special Legislative Session passed an act creating the **Coal Severance Tax School Bond Contingency Loan Fund** (Contingency Loan Fund). A total of \$25 million of school bonds was authorized to be issued and secured by this fund. For as long as there are any outstanding school district bonds secured by the Contingency Loan Fund, an amount equal to the next 12 months of principal and interest payments due on any school bonds is retained in the Contingency Loan Fund. DNRC provides written notice to the Department of Revenue in January of each year of the amount needed to secure school district bonds.
- The **Treasure State Endowment Fund** (Endowment Fund) was established when voters approved the ballot measure on June 2, 1992. During the first quarter of each state fiscal year, 50 percent of the amount in excess of what is retained in the Bond Fund and in the Contingency Loan Fund is deposited in the Endowment Fund. The Department of Commerce notifies the Department of Revenue when interest earnings are needed to fund local infrastructure projects. The Department of Revenue then transfers the interest earnings from the Endowment Fund to the **Treasure State Endowment Special Revenue Account** (Revenue Account). The Department of Commerce then approves the disbursement of funds to authorized local governments. Interest earnings not transferred to the Revenue Account for projects are retained in the Endowment Fund.
- During the first month of each quarter of the state fiscal year, 50 percent of the amount in excess of what is retained in the Bond Fund and in the Contingency Loan Fund



	Tax Allocation	FY 98 (\$1,000)	FY 99 (\$1,000)
Coal Severance Tax Collections (Revenue Oversight Committee Revenue Est)		38,831	38,223
Coal Severance Tax Trust Fund	50.00%	19,416	19,112
General Fund	25.25%	9,805	9,651
Long-Range Building Program	12.00%	4,660	4,587
Program Funding	8.36%	3,246	3,195
Other			
Parks Acquisition and Management Trust	1.27%	493	485
Renewable Resource Loan Debt Service	0.95%	369	363
Cultural and Aesthetic Trust and Capitol Art	0.87%	338	333
Virginia and Nevada Cities	1.30%	505	497

is transferred to the **Coal Severance Tax Permanent Fund** (Permanent Fund). State law authorizes the Board of Investments to invest up to 25 percent of the Permanent Fund in the Montana economy.

5. Investment income on the deposits in the Bond Fund, the Contingency Loan Fund, and the Permanent Fund are periodically transferred to the **Coal Severance Tax Income Fund**. The only exception to this is the Endowment Fund, where any interest earnings are either transferred to the Revenue Account or retained in the Endowment Fund.
6. The entire balance in the Income Fund is transferred to the **General Fund** on a monthly basis.
7. Under the Coal Severance Tax Loan Program, the state sells coal severance tax bonds and loans the proceeds to local governments for various infrastructure projects. The borrowers make semiannual or annual loan payments, which upon receipt are credited to a **Debt Service Account**. The terms of the loans vary, but generally involve an interest rate subsidy for the first five years of the loan followed by a direct pass-through of the interest rate on the state bonds for the remaining life of the loan. The loan program and debt service accounts are administered by DNRC.
8. Debt service payments on the bonds are due each June 1 and December 1. To the extent that funds on hand in the Debt Service Account are insufficient to pay principal and interest on the bonds when due, funds are transferred to the Debt Service Account from the Bond Fund.



On January 1 of each year, funds are transferred to the Debt Service Account from the Bond Fund to the extent necessary to cause the balance in the Debt Service Account to equal one-twelfth of the next two ensuing semiannual debt service payments. DNRC provides written notice to the Department of Revenue if funds are needed to pay debt service or to make the required transfer on January 1. On January 1 of each year, DNRC also sweeps the Debt Service Account of funds in excess of one-twelfth of the next two ensuing semiannual debt service payments. The excess is returned to the Bond Fund in repayment of borrowed money, if necessary, or deposited in the Renewable Resource Grant and Loan Program Special Revenue Account.

9. On each June 1 and December 1, the state pays debt service on the bonds from amounts on hand in the Debt Service Account. Payments are made by DNRC.

ABBREVIATIONS

AFY	acre-feet per year
AUM	animal unit month
BIA	Bureau of Indian Affairs, U. S. Department of the Interior
BLM	Bureau of Land Management, U. S. Department of the Interior
BMP	best management practice
BOGC	Board of Oil and Gas Conservation
CARDD	Conservation and Resource Development Division
CBSA	Crow Boundary Settlement Act
CD	conservation district
CDB	Conservation Districts Bureau
cfs	cubic feet per second
CRM	coordinated resource management
CRP	Conservation Reserve Program
DEQ	Montana Department of Environmental Quality
DFWP	Montana Department of Fish, Wildlife and Parks
DNRC	Montana Department of Natural Resources and Conservation
DOR	Montana Department of Revenue
EIS	environmental impact statement
EPA	U. S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FWS	Fish and Wildlife Service, U. S. Department of the Interior
FY	fiscal year
GIS	geographic information system
HRA	Hazard Reduction Agreement
KYW	know your watershed
MACD	Montana Association of Conservation Districts
MBMG	Montana Bureau of Mines and Geology
MBPY	million barrels per year
MCA	Montana Code Annotated
MCFT	million cubic feet
MDT	Montana Department of Transportation
MEPA	Montana Environmental Policy Act
MFOA	Montana Forest Owners Association
MPC	Montana Power Company
MSCA	Montana Salinity Control Association
NACD	National Association of Conservation Districts
NPS	nonpoint source
NRCS	Natural Resources Conservation Service, U. S. Department of Agriculture
RCAC	Resource Conservation Advisory Council
RC&D	resource conservation and development
RDB	Resource Development Bureau
RDGP	Reclamation and Development Grants Program
RIT	resource indemnity tax
RWRCC	Reserved Water Rights Compact Commission
SB	senate bill
SFLMP	State Forest Land Management Plan
SMZ	streamside management zone
SUPJV	Seven-Up Pete Joint Venture
UIC	underground injection control
USBR	Bureau of Reclamation, U. S. Department of the Interior
USDA	U. S. Department of Agriculture
USFS	Forest Service, U. S. Department of Agriculture
USGS	Geological Survey, U. S. Department of the Interior
WMB	Water Management Bureau
WRD	Water Resources Division
WSC	Western Stewardship Committee

**“To help ensure Montana’s land and water resources
provide benefits for present and future generations”**



MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

1625 Eleventh Avenue

P.O. Box 201601

Helena, MT 59620-1601

541 copies of this document were published at an estimated cost of \$2.50 per copy. The total cost of \$1,376.00 includes \$1,350.00 for printing and \$26.00 for distribution.

Persons with disabilities who need an alternative, accessible format of this document should contact DNRC at the address above. Phone 406 444-2074; fax 406 444-2684.